EDUCATIONAL SCREEN AND

AUDIOVISUAL

GUIDE

June, 1959

EUGENE B. POWER
UNIV. MICROFILMS
313 N. 1ST ST.
ANN ARBOR, MICH.
COMP

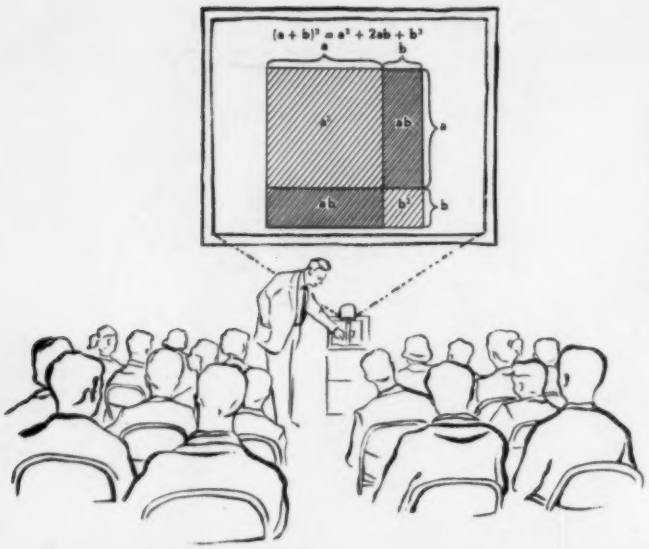
Scene from "New Faces of Africa," Broadcasting and Film Commission
National Council of the Churches of Christ in the U. S. A.

PRACTICAL USE OF CLOSED CIRCUIT TV— *page 284*

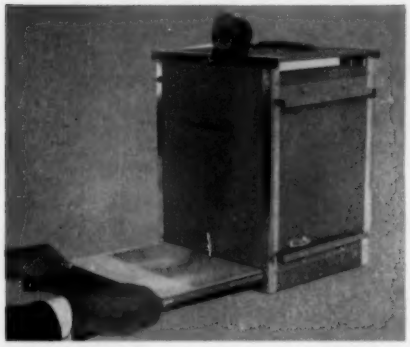
TRANSPARENCY TRICKS *page 288*

MAKE YOUR OWN SLIDES

with the new Tecnifax Slidemaster System

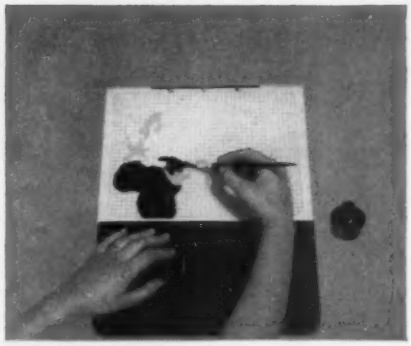


The Tecnifax Slidemaster System is an integrated process for producing Diazochrome multi-colored slides for overhead projection . . . from the original drawing through mounting of the slide. No special skills are required . . . rudimentary techniques produce dramatic, colorful, professional-looking transparencies.



PROTO-PRINTER . . . a compact, portable, platen printer, weighing only 37½ lbs . . . equipped with a readily-replaceable photo-flood lamp, controlled by an automatic exposure timer.

"PICKLE-JAR" DEVELOPER . . . a simple, trouble-free ammonia-developer, with a new, hinged lid for rapid, fume-free insertion and removal of films.



TECNIBOARD . . . a basic component of the system, used for preparation of masters, as a platen for exposures, and for mounting of slides.

FOR ADDITIONAL INFORMATION

For additional information and prices, please write to Section TS, Visucom Laboratories, Tecnifax Corporation, Holyoke, Massachusetts. Please indicate in your letter the nature of your interest in Visual Communication activities.

INTRODUCTORY KIT . . . contains enough Diazochrome film, mounts, and accessories to produce *ten* five-color transparencies . . . *plus* instruction manual and Diazochrome Color Guide.

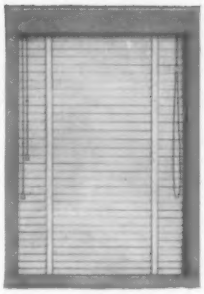
TECNISTAPLER . . . special, heavy-duty stapling pliers for hinging overlays on dynamic transparencies.

TECNIFAX
CORPORATION
Manufacturers of
Visual Communication
Materials
and
Equipment
HOLYOKE, MASSACHUSETTS

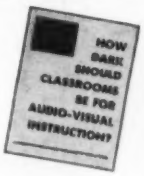
NO MORE AUDIO-VISUAL ROOMS!

Audio-Visual rooms (special projection rooms) are no longer adequate. The ambient light of the modern classroom must be quickly and easily adjusted to suit any subject, projector or student activity. LEVOLOR Audio-Visual venetian blinds can be installed in all classrooms to do just that.

With a LEVOLOR installation, the instructor can at any time and for any subject quickly and easily adjust the classroom light. There's no delay, no need for a special room assignment.



Write for Levolor's invaluable survey report "How Dark Should Classrooms Be For Audio-Visual Instruction?" No charge or obligation. Write to Audio-Visual Dept., Levolor Lorentzen, Inc., 720 Monroe St., Hoboken, N. J.



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TRADE MARK OF LEVOLOR LORENTZEN

The Scientifically Developed Audio-Visual Blind

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EDUCATIONAL SCREEN AND

AUDIOVISUAL

GUIDE

June, 1959 Volume 38, Number 6, Whole Number 376

EDITORIAL

283 Progress Report on Glass

ARTICLES

284 Television as a Teaching Tool *Robert M. Diamond*

288 Techniques for Making Transparencies *Harvey R. Frye*

291 AV Courses for Teachers – Essential or Expendable? *J. Robert Murray*

294 AV Coordination in a Large Urban School *Edward J. Kosell*

DEPARTMENTS AND FEATURES

278 On the Screen

280 Have You Heard? News About People, Organizations, Events

282 With the Authors

282 Calendar of Coming Events

296 Film Evaluations *L. C. Larson, Carolyn Guss*

300 Filmstrips *Irene F. Cypher*

302 Audio *Max U. Bildersee*

304 AV in the Church Field *William S. Hockman*

307 New Equipment and Materials

312 Helpful Books

313 Trade News

314 Index to Advertisers

Inside Back Cover – Trade Directory for the AV Field

Founded in 1922 by Nelson L. Greene

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NEW from DAGE

A Completely Mobile Educational TV System

ANY CLASSROOM CAN BE A STUDIO WITH THE ETS-1

The new ETS-1 television system goes to class with the student. Never before has the versatility of a completely mobile closed circuit system been available.

In the studio for the first morning class, then down the hall for a special laboratory session — through standard 30″ doorways — in standard elevators and in and out of the panel truck winding up back in the studio ready for classes the following day.

Typical advantages of the ETS-1 are: *Complete flexibility* of equipment; starting with a single camera chain and working up to the full complement of equipment is possible. *Extremely high picture quality. Simplicity of operation. Ease of maintenance* with slide out racks.

Plan your Educational Television program now around the new Dage ETS-1. Obtain professional quality with complete mobility.

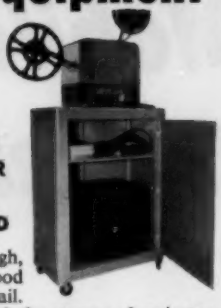
Write today for a descriptive brochure on the ETS-1 and helpful hints on how to plan your educational television system. Write: Manager of Educational TV Sales.

DAGE

DAGE TELEVISION — a division of
Thompson Ramo Wooldridge Inc.
Michigan City, Indiana

TRW

USEFUL!
products for your A-V equipment



PORTABLE PROJECTOR CABINET AND STAND

All steel, 42" high, 29" x 17" plywood top with safety rail. Gives over 11 cu. ft. for storage of projector, speaker, etc. Adjustable shelf. Safe-locking panel door. Four 3" casters, two with brakes. Baked enamel finish in tan or gray.

Model No. 42

PORTABLE STEEL PROJECTION STAND

Four 3" casters, two with brakes. Height: 41". Stable, tapering design (19" x 31½" at bottom) 18" x 26" at top. Rail on 3 sides. With non-skid rubber shock-proof mat. All steel, with 1" tubular steel frame. Baked enamel in tan or gray.

Model No. 41

TAPE AND FILM CABINETS

For every need . . . 5" or 7" tapes, film strips, slides. Cabinets are all steel, with full suspension drawers. Photo shows each type of cabinet stacked on handy Mobile Cart.

YOUR INQUIRY promptly answered on above items; also, Film Storage Racks, Record Storage Cabinets, Phono Carts, Lecterns.

Smith System MFG. CO. SINCE 1905

Dept. ES 212 Ontario St. S.E., Minneapolis 14, Minn.

ON THE SCREEN

Cover Scene

"New Faces of Africa" is the subject which provides the June cover picture. This film, developing the theme of growth and unrest in formerly undeveloped lands, is the 1959-1960 foreign mission study film of the Broadcasting and Film Commission, National Council of the Churches of Christ in the U. S. A., 220 Fifth Avenue, New York City 1. For further details, turn to the listing in the *New Equipment and Materials* section.

July Convention Issue

Next month we will present a comprehensive lineup of the great NAVA Convention taking place July 25-28, as well as program listings of the six concurrent organizational meetings: Educational Film Association; AV Workshop for Industrial Training Directors; Agricultural AV workshop; Religious AV Workshop; AV Conference of Medical and Allied Sciences, and Association of Chief State School AV Officers. A complete exhibitor's list will be presented, along with a large array of new equipment and a cross-index of manufacturers, distributors, and all types of audiovisual equipment and materials. This should prove to be a helpful addition to our regular service, deserving of a convenient location on the audiovisual director's desk all year round.

Last Call for Copy!

Recently a mailing was sent out to manufacturers in this field, giving them the opportunity to be listed in our complete Guide to Sources of Audiovisual Equipment and Materials, and to display in print their newest products. If through some accident you did not receive one of these letters, you may still be listed in the July issue, provided information on the type of equipment and materials is in our hands by June 9.

EDUCATIONAL SCREEN & AVGUIDE

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NEW
from Ozalid
Audio Visual . . . the

PROJECTO-PRINTER 30

Makes transparencies for overhead projection from any source material . . . in minutes!

Now, with the new Ozalid Projecto-Printer 30, you can prepare transparencies—on the spot—*without being a photographic expert.* Using any original visual source material . . . textbooks, manuals, charts—whether opaque or tracings—two-sided, or even book-bound . . . you can get dozens of new visual effects in black and white or color. You need no darkroom—no trays—no mixing of messy chemicals. The Projecto-Printer 30 is a simple, self-contained unit and the cost is low. The simple process takes mere minutes. Anyone in your office can make projectables in just a few easy steps.

Overhead projection gives you complete flexibility in planning and delivering your presentation. Use the projection stage as a "blackboard" for specific emphasis. You're in complete control—no need for an assistant.

Ozalid, Dept. No. 16, Division of General Aniline & Film Corp. Johnson City, New York

Please send me your descriptive literature on the Projecto-Printer 30.

Name_____

Company_____

Position_____

Address_____

City_____

State_____

OZALID audio visual

Ozalid Division of General Aniline & Film Corporation

HAVE YOU HEARD?

News About People, Organizations, Events

At Florida workshop Jim Froberg, graduate student at Florida State University, demonstrates transparencies with the overhead projector for a group of teachers.

Florida Group Holds AV Workshop

The Audio-Visual Section of the Florida Education Association presented a program for teachers at the annual meeting March 20, in Tampa, Florida. More than a thousand teachers listened to Dr. Irene Cypher and participated in the meeting. The first part consisted of a talk by Dr. Cypher on the "Importance of Materials in Teaching," and a visualized demonstration on "Display Materials" presented by Otis McBride and Bill Quinly of Florida State University. During the last hour teachers visited twenty-odd concurrent demonstrations covering a wide range of instructional materials. These included such topics as making transparencies, the polaroid camera, homemade filmstrips, puppets, arithmetic kits, Junior Museum materials, types of book bindings, the micro projector, school participation in fair exhibits, new science books, book illustrations, elementary science carts, elementary industrial arts carts, dry mounting, wet mounting, rubber cement mounting, vertical file and dioramas.

Response to the program has been enthusiastic, and the evaluation indicates that the AV Section will be asked to present programs for teachers at each annual meeting.

Annual AV Workshop At Indiana U.

"Improving Learning Through the Use of Audiovisual Materials" is the theme of Indiana University's annual audiovisual conference-workshop, to be held on the campus June 22-26. Lectures, panel discussions, demonstrations and informal group participation are designed to be beneficial for all those interested in the educational use of audiovisual materials. Monday through Friday, the programs will be centered around: the curricular basis for the use of AV materials; techniques for making AV materials; suggestions for using AV materials; practical aspects of administering an AV program; evaluation of AV programs.

One hour of credit may be earned for attendance at the complete conference. For further information, write Dr. Carolyn Guss, Audio-Visual Center, Indiana University, Bloomington.

Questionnaires Test Reactions to ETV

Henry S. Dyer, Educational Testing Service Vice President for Research and Advisory Services, and his assistant, Anne H. Ferris, have developed an evaluation questionnaire called "Sizing Up Your School Subjects." The approach is indirect in order to get the students' unbiased reactions. All students in a given grade complete the questionnaires, those in experimental TV and control groups as well as those who have no connection with the study. Only the answers from the experimental and control groups are used in the analysis.

Topics under discussion include: the student's likes and dislikes in subject areas; ease of learning; time involved in studying and preparation; comparative usefulness of the subjects; how much the student feels he is actually learning.

USF Opens New Language Lab

The University of San Francisco has constructed a sixty-booth, $40,000 electronic language laboratory, under the direction of Father P. Carlo Rossi, S. J., member of the language faculty. Students will now spend two hours in class and four in the laboratory, where each student will be able to proceed at the level of his own ability.

People in the News

Col. Homer F. Kellems, nationally known lecturer, educator, and director of photography for Eye Gate House, Inc., was ambushed and killed by Algerian rebels early in March. He was on a photographic assignment with his assistant, William B. Hobbs (who survived), and had just entered the rebel-infested area of West Algeria from Morocco. It is thought that the rebels were ignorant of his nationality: Col. Kellems was the first American killed in the four-year-old rebellion.

John T. Hawkinson, manager of audiovisual services for the Illinois Central Railroad Company, Chicago, was elected president of the Industrial Audio-Visual Association at that organization's annual meeting in Chicago on April 28, 29 and 30. The retiring president is Frank B. Greenleaf, film supervisor for United States Steel Corporation's Chicago district.

At the Sunset Heights Elementary School, selected by the A.A.S.A. for its exhibit of outstanding school designs, Mr. J. H. McBurney, Superintendent of the Webster City, Iowa, Community School District, says:

"...trouble-free performance, yet our film schedules really punish these Kodak Pageant Projectors."

"Our projectors must run constantly against a tight schedule, because we have only one week to show rented films throughout our entire district.

"Our ten Pageants stand up well against this grueling schedule, seldom needing service. Yet, when service is required, our Kodak Audio-Visual Dealer is quick to respond.

"We use Pageants exclusively."

One reason why Kodak Pageant Projectors stay trouble-free—they're built to keep an operator out of trouble.

No confusion: No parts for an operator to attach incorrectly. Reel arms and drive belts, for example, are permanently attached.

Easy operation: No trouble-making threading problems. The film path is printed in red right on the machine. One try is all anyone needs to thread it properly without getting into trouble.

Permanent lubrication: No under-oiling or over-oiling problems. No need to keep lubrication records. Pageant Projectors are oiled for life at the factory.

Ask your Kodak Audio-Visual Dealer to demonstrate. Or, for literature, write for Bulletin V3-22.

Kodak Pageant Projector 〉 **EASTMAN KODAK COMPANY, Dept. 8-V, Rochester 4, N. Y.**

With the Authors

ROBERT M. DIAMOND is presently in charge of the closed-circuit television experiment taking place in the Plainedge High School, Long Island — the subject of his article appearing in this issue. For two years he taught in the Schenectady public schools, and during this time presented the TV series "From Og to Infinity" for the Mohawk-Hudson Television Council over WRGB. These programs were used in schools throughout upper New York State, Canada and New England in 1957-58. Mr. Diamond is also a member of many educational and audiovisual associations.

☆

HARVEY R. FRYE serves as supervisor of the Graphic Arts Department of the Audio-Visual Center (which department he formed in 1948), and Instructor of Education at Indiana University. An authority on the production of inexpensive visual materials, he developed the first course in this subject in 1950, has written many articles on it, and has served as educational author for a series of films on the topic now being distributed by the University. Mr. Frye has given demonstrations of his methods before many audiovisual conferences and workshops.

☆

EDWARD J. KOSELL is assistant principal of the Howland Elementary School, Chicago. He has been an audiovisual coordinator for approximately three years, and is also a well qualified teacher of the educable mentally handicapped and adjustment. At present, Mr. Kosell is working on his Ed. D. degree at Loyola University.

☆

J. ROBERT MURRAY, who has made a thorough study of the place of AV courses in the teacher training curriculum, is Associate Professor of Psychology and Education, and Coordinator of the Audio-Visual Center at the State Teachers College, Indiana, Pennsylvania. A member of various organizations, he is presently secretary-treasurer of the Pennsylvania Audio-Visual Association for Teacher Education.

☆

DEPARTMENT EDITORS are: AUDIO—Max U. Bildersee, audio education consultant, state department of instruction; AV IN THE CHURCH FIELD—William S. Hockman, Director of Christian Education, First Presbyterian Church, Glens Falls, N. Y.; FILM EVALUATIONS—L. C. Larson and Garolyn Guss, both of the Audio-Visual Center, Indiana University, Bloomington; FILMSTRIPS — Irene F. Cypher, Associate Professor of Education, New York University.

The KEYSTONE Standard Overhead Projector
is available for purchase under the

National Defense Education Act

The Keystone Standard Overhead Projector is designed for the projection of Standard (3¼" x 4") Lantern Slides, Polaroid Slides, and Handmade Lantern Slides or, with appropriate accessories Tachistoslides (4" x 7"), 2" or 2¼" Slides, Strip Film, and Microscopic Slides.

It is useful —

In the Science Category with appropriate units of slides in Physics, Biology, General Science, Health, Hygiene, Physiography, and Elementary Science.

In the Mathematics Category in teaching Number Combinations tachistoscopically; Solid Geometry with Stereograms.

In the Modern Languages Category in teaching French and Spanish with Tachistoscopic Units.

Write for Further Information or a Demonstration by our Local Representative.
KEYSTONE VIEW CO., Meadville, Pa. *Since 1892, Producers of Superior Visual Aids.*

Calendar

June 15-17—Technical Association of Graphic Arts, annual meeting, Rochester, N. Y.

June 15-19—Television Workshop, San Jose State College, San Jose 14, Calif.

June 22-26—Indiana University A-V Workshop, Bloomington, Ind.

July 10-11—New York State Audio-Visual Council, summer meeting, Statler-Hilton Hotel, Buffalo, N.Y.

July 10-12—Associated Amateur Cinema Clubs, Inc., Film Festival, Conrad Hilton Hotel, Chicago, Ill.

July 19-23—National Institute for A-V Selling, 11th annual, Indiana University, Bloomington, Ind.

July 19-23—Cooperative Conference on Instructional Materials, University of Texas, Austin, Texas.

July 20-31—Annual Laboratory-Demonstration Workshop, The Betts Reading Clinic, Haverford, Penn.

July 25-28—National Audio-Visual Association Convention and Exhibit, 19th annual, Morrison Hotel, Chicago, Ill.

Aug. 10-21—Summer Audio-Visual Workshops, Syracuse University, Syracuse, N. Y.

Aug. 16-22—Robert Flaherty Film Seminar, 5th annual, University of California, Santa Barbara Campus, Goleta, Calif.

Sept. 2-13—North American International Photographic Exhibit, nineteenth annual; closing dates for prints July 24 and slides, August 7. California State Fair and Exposition, Sacramento, Calif.

Sept. 6-11—International Conference on Audio-Visuals in the Church, 16th annual, Green Lake, Wisc. Dept. of AV and Broadcast Education, National Council of Churches, 257 Fourth Ave., New York 10, N. Y.

Sept. 28-Oct. 1—Industrial Film and AV Exhibition, New York City.

Oct. 26-30—Society of Photographic Scientists and Engineers, annual national conference, Edgewater Beach Hotel, Chicago, Ill.

Oct. 26-30—National Association of Educational Broadcasters, Sheraton Cadillac Hotel, Detroit, Mich.

Progress Report on Glass

It's been a whole year since we've said anything about daylighting. Daylighting, you know, is that practice formerly advocated by glass companies and some school architects which brings so much daylight into the classrooms you can't use them to teach in. At least you can't teach with audiovisual materials; and you and we know that's the best way to teach.

Last year we cried out in protest to an advertisement pleading for classrooms flooded with sunlight, built with "the largest possible areas of glass to gather in this light . . . *clear* glass from floor (or low sill) to ceiling, and room wide." Though it was a beautiful four-page full color ad, we didn't like what it had to say. From our point of view it was completely in conflict with our beliefs about instruction.

We suggested that you write the company and tell them the facts of audiovisual life. Whether you did or not, they've learned. We report progress – both in glass making and in ad writing. They now recognize the need for audiovisual materials in teaching. This is heartening. What's more, they've got a new kind of glass for windows that permits you to use just as much as before, but this new glass blocks out 55.8 percent of the light. That *is* progress.

Let me tell you more about the current ad. It's six full color pages this time telling about San Angelo Central High School in San Angelo, Texas. It's a campus type school of eleven buildings. Truly it is one of the most beautiful high schools we've ever seen or seen pictured. Teachers, administrators, pupils and architects quoted in the above ad have only highest praise for this magnificent school plant. Even though glass has been used for both interior and exterior walls, you can use audiovisual materials and equipment.

Superintendent Wadzeck in an interview for the ad said, ". . . in many places you can see right through the buildings because of the glass." The questioner then asked, "Doesn't that interfere with the use of visual aids?"* The reply was positive and direct, "Not in the least. The plate glass in the outside walls is a low-light-transmission type and we have drapes for the interior walls. We have invested over $10,000 in a variety of visual-audio (sic) equipment and use it *all* effectively."

Now, isn't that something! We were delighted to see this recognition of the place and importance of audiovisual instruction in an advertisement for glass. Furthermore, there was no emphasis on daylight. In fact, whereas the word "daylight" had been used a dozen or more times in four pages last year, I could find it only twice in this year's six pages.

I read every word, too. Especially intriguing is this apparently new idea of low-light-transmission type glass. They point out that ordinary quarter inch plate glass transmits 89.1 percent of the daylight. This new kind is neutral grey in color. It lets in only 44.2 percent of the light. This results in reduction of glare and brightness.

Now we don't know a thing about glass making, but if they can do this, it would seem that their research divisions could carry progress further. Surely they should be able to develop black plate glass that would transmit only 00.2 percent of the daylight! This then could be used as an alternative to audiovisual blinds and dark shades. And *then* they could run those beautiful six page advertisements in audiovisual magazines and we wouldn't have to tell you about them anymore! You could read them yourselves!

Paul C. Reed

**Apparently they didn't know that the term "visual aids" is no longer used in the best audiovisual circles.*

by Robert M. Diamond

Television as a Teaching Tool

On September 4th, 1958, an experimental project in educational television was begun in the Plainedge school system. During these months we have seen the medium develop into an outstanding teaching tool. Every department within the junior and senior high school has used television to enrich, improve and diversify the instruction.

The Plainedge school system is typical of Long Island schools, in that it is located in a strictly residential area with all the tax and heavy population problems that this implies. What is atypical is the administrative approach to television. Several years ago, when plans for the new high school were first submitted, there was included a complete master antenna system that would reach every room within the building. Also included in the plans were a studio and control for a closed-circuit originating point. Although a separate sound system for the television broadcasting would have been preferred, it was far more practical and economical to use the schools central P.A. system.

The early planning for the television program was done by the supervising principal, the assisting supervising principals and the high school administrators. Their recommendations were then passed on to the school board for approval. Once the board had approved the project, the administrators looked around for a coordinator. What was needed was an individual with both educational and television experience, who would be able to help the further conceptual development and then be able to run the program.

The previous year I had been fortunate to have been chosen by the Schenectady school system and the Mohawk-Hudson Television Council to produce a program over WRGB for the schools affiliated with this group in New York State, Canada and New England. With this background plus several years of teaching and work in Audiovisual aids I was able to qualify for this position—a job that has given me excitement, creativity and enjoyment that I have never before experienced.

As the plans for the new school were developing, so were the concepts that would later shape the programs themselves. It was decided that at Plainedge, television was to be used as a *teaching tool*. The purpose of the project was not to save teachers, but to raise the teaching level by bringing to them new methods and additional resources.

With the development of this concept came a basic pattern of the equipment that would be needed. The equipment had to be simple, as it was going to be completely student operated and maintained. The control system would have

During a program on Japanese culture, a student inside the control room selects the camera picture that will go on throughout the school (as shown in the small set, center). He also controls the Zoomar camera.

to be limited to as few operations as possible and all this would have to be done within a limited budget.

After investigating all the equipment that was then available it was found that there was none that would serve our purpose. At this time it was decided to see if it were feasible and possible to have our equipment custom designed to meet our needs. We found a company in New York City who could supply us with highly effective equipment, custom designed for our needs and within our budget.

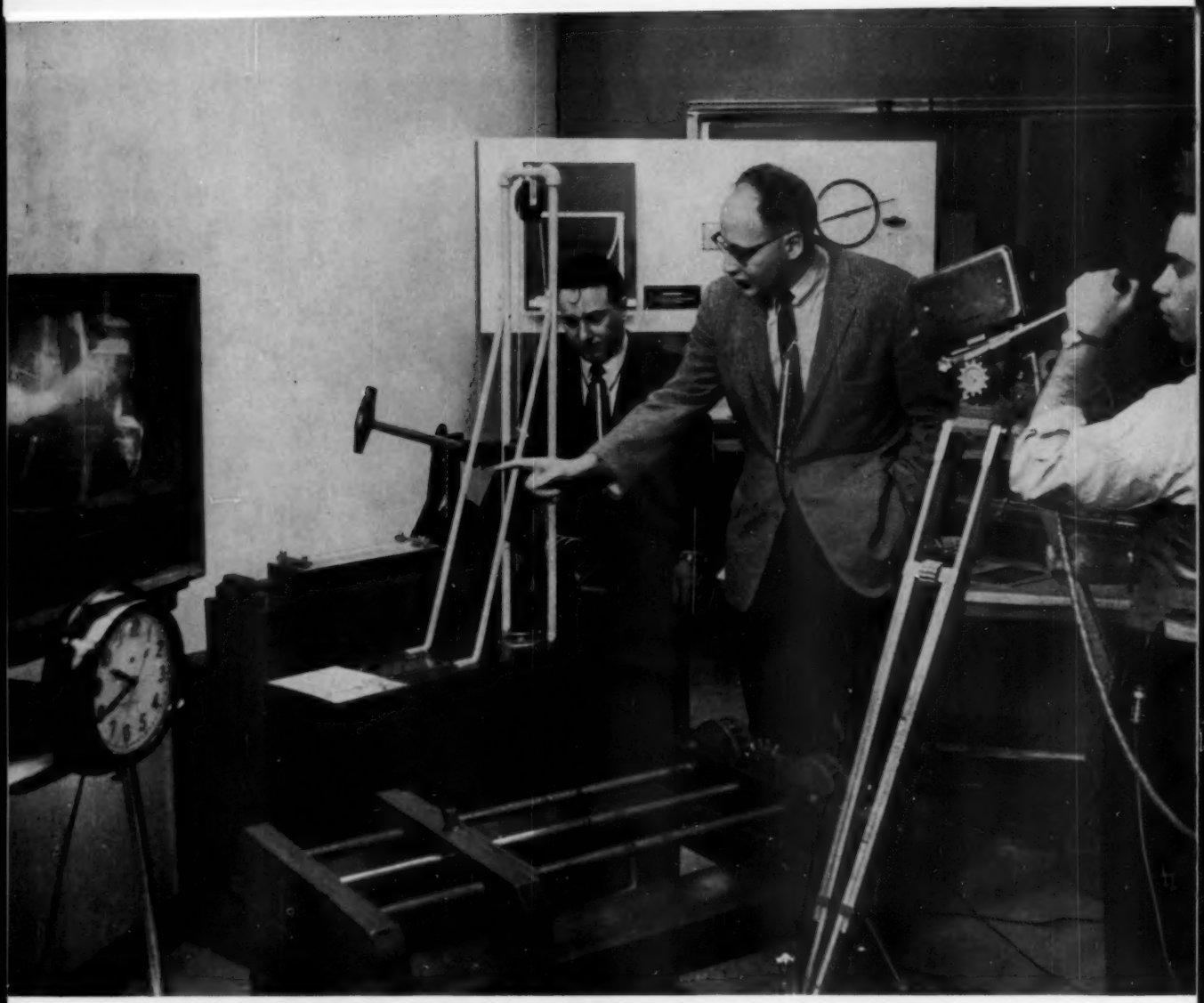
Then came the realization that to be of greatest use the entire setup would have to be portable. From this evolved the equipment that we now have. In constant use are two independent, basic camera chains. Each is equipped with an automatic light compensator. One camera is student operated while the other is remotely controlled from our control console. This remotely controlled camera also is equipped with a three to one Zoomar lens. We can now televise from any room in our building to any other. Within fifteen minutes our complete television network can be moved to another part of the building. One camera may be used to televise to the rest of the school while the other is moved into a classroom with several receivers (we have twelve, all mobile) for use within that room alone; the camera can be operated by the instructor without student assistance. The teacher uses controls in this situation.

Here is a review of the steps involved in the organization of the closed-circuit television program in a high school. The administration decides what the needs of the school are. Can television help meet these needs? If telvision can meet these needs, what will be the basic objective of the project? What will be the cost of such a program?

Suitable information must be prepared to be submitted to the school board for approval. Once approval comes, personnel must be hired to put the project in operation. A constant re-evaluation of the project is carried on to see if the objectives are being met.

After the designing of the equipment was complete it became necessary to face the problem of making sure that our programs fit the basic aim of being teaching tools. To do this it was imperative that each program be designed to fit a specific part of the course syllabus and that it would reach the students at the exact time that area was being studied. Over the period of time this project has been in operation three different types of programs have evolved. Each meeting our requirements, but each meeting them in its own way.

First, there is the type of program that brings to the classroom resources that otherwise would be unavailable. A majority of our programs are of this type. We have had the cooperation of businesses both large and small, foreign countries, teachers and outstanding personalties. We



A model of Leonardo da Vinci's "file cutter" is used in an introductory program to science and invention in the junior high school. At left is Dr. Roberto Guatelli, da Vinci authority from IBM, which provided twenty working models of the latter's inventions. In the center is the author and at right the camera operator watches the studio monitor for focus and lighting.

have found that by using television and thus reaching a greater number of students we have been able to have this cooperation that otherwise would have been impossible. We have also been able to make better use of the skills possessed by members of our faculty. Now many students may receive the benefits of projects and special presentations taking place within other classes in the same subject area.

The second type of program enables teachers to present material in a much more effective manner than ever before. For our biology classes we now move the remote controlled Zoomar camera and four receiving sets into the classroom. For the first time every student in the class can follow along in a dissection step by step with the instructor by watching the screens. Gone are the days when several groups, one at a time, came up to the desk, watched a demonstration and then went back to their seats to work. Now an entire class period can be spent on this presentation. Every student has a front seat, every student works on the same thing at the same time. By using our high magnification lenses it is possible to fill up the entire screen with the smallest of objects. Electronics classes for the first time are learning to take apart and put together a switch that up to now has been too small for more than one student to see demonstrated at a time.

The third type of program, while not as common as the first two, is still an extremely important one. A library orientation that at one time would have taken close to a month, with one class going to the library at a time, was completed in less than two days. By televising from

the library into the English classes we were able to reach all 2,200 students and yet free both the library and its staff for other activities. The administration used television for their orientation programs also. By this method information reached the students in a better way and at the same time saved both time and effort.

As is true of many things, the television project is only as good as the programs themselves. The programs at Plainedge are unique, not only in the areas they cover, but also in the way they are developed. There is no such thing as a regularly scheduled program. The programs are done only if they are requested by a teacher or a department. Rarely will a class see more than two or three television programs a month. We program for every department in the school. We mold our programs to fit the classroom, not our classrooms to fit the program.

At the beginning our teachers were skeptical. We had many who had had previous experiences with educational television that were not pleasant. For this reason programming was started at a slow pace. All of our earlier programs started from within the television department and were then offered to the individual teachers. Whenever possible we tried to get individual teachers to help us with the programs. At first this was not an easy task.

The change that we were looking for, where the teachers would themselves design the program, started with a series of three programs on the elections. These programs were done at the request of, and under the guidance of, the Citizenship Education department. The first program had a representative from each major party discussing the "Grass Root" politician. This program was followed by two others where the candidates for office were interviewed by students from the classes receiving the programs.

This series brought us two important firsts. For the first time a department was almost entirely responsible for a program. By suggesting the programs, by arranging for the speakers and by having students from the classes ask the questions the teachers were able to have these programs cover exactly what they wanted them to.

These programs also gave us the first opportunity to use the school's intercom system for a question and answer period. Mid-way through the program we allowed time for classroom discussion and during this period the rooms were able to call in questions for the speakers. This gave the teachers another opportunity to have what they wanted covered.

The election series was a turning point in the programming at Plainedge. We have now reached a point where our programs are developed in such a way as to meet the objectives of the television project raised long before school opens.

The basic idea for a program will usually come from a teacher who will mention that televising a specific area would be of great help. At this point I will usually check with other teachers in the field and see if this program will fill the needs of many classes. I will find out if the program fits directly into the course of study for which it is intended. If the program would not be directly related, or if he or she is the only teacher who can use the program at that time, the idea will be dropped.

If there appears to be a demand for the program the next question is, who should do it? Should we bring in an outside resource or do we have in the school a teacher who could handle the program? Often the teacher who had the idea for the program will have a specific person in mind. At least one person from the department will work directly with me on the program until completion.

If an outside source is needed I will usually make the initial contact. If, for example, industry X says that they will be glad to help us with a program, a meeting is arranged. At this meeting there will usually be representatives from the industry, the teacher who suggested the program, the department chairman and myself. Before the meeting takes place the teacher and the chairman will have contacted the other teachers who will be able to use the program. The objectives of the program, what they wish included and when the program should be scheduled as to tie in directly with the subject area are discussed beforehand.

At this meeting the teachers will find out if industry X will be able to do this program for us. If the answer is affirmative a tentative program is set up. At this point the representative must return to his company to see if they can meet the requirements of the department.

Several weeks later I receive a plan for the program from the industrial representative. If this outline does not meet the wishes of the teachers the program will be dropped at this point. During this period there will of course be much communication between the school and the company. If the department is satisfied with the suggested program the teacher working with the project will now make up an outline for all the teachers in the department. I would like to mention that several programs were cancelled when they were not available at the exact time they were needed.

This outline for the teachers will include objectives of the program, when it is being televised, by whom, content as it relates to the subject area, suggested pre and post program activities and often a list of materials that industry X has made available for the use of the teachers in connection with the forthcoming program.

It is now up to the teachers. If they wish to use the program a form is filled out which insures the teacher that a television set will be in the right room at the right time. In all cases programs are repeated so as to reach the greatest number of students as possible.

Briefly this describes the Plainedge program. We believe we are doing the right thing, but we are not sure. To see if we are meeting our objectives Dr. Roscoe Brown of New York University is researching our entire TV program. Results of our early research will be available shortly.

This type of programming has had direct implications throughout the school. The principal object is of course, the improving of instruction. We believe this object is being met. We are constantly reaching for more effective and enriched teaching. By using closed-circuit television as a teaching tool we feel that this is taking place.

by Harvey R. Frye

Techniques for Making Transparencies

THROUGH the years people depending upon visual methods of communication have depended strongly on collections of pictorial materials called tearsheet files or "picture morgues." Most of the material is taken from magazines, brochures, newspapers. These picture files form an extremely valuable source of material to be used for bulletin boards, flannel boards, still picture sets, etc. Frequently enlargement of this material is desirable. Some teachers have taken the pictorial material, mounted it carefully, eliminating unwanted content, and photographed it either on black and white or color film, and made it into slides. Use of the slide projector or the opaque projector of course magnifies the material on the screen to a size that will permit the entire class to view the picture content all at one time. Giving these picture files a flexibility in use is extremely important when a teacher desires varied approaches in her method of communicating.

With the increased use of large size transparent overhead projectors, experimentation began in trying to convert pictorial material from the magazine page to a projectable transparency. A great many approaches were made to this problem. A number of years ago commercial artists found they could remove type from printed pages with transparent tape. Others found they could transfer ink from a printed page with a combination of soap and turpentine. Through a combination use of rubber cement and special liquid plastic in an oven, an exciting method of transferring printed images on glass evolved. The results were excellent, but the process was long and involved. Specially coated frisket paper used by artists was found to "lift" the image from the surface of clay coated paper. (See *Educational Screen and AUDIOVISUAL Guide*, February, 1955.) Due to the translucency of the base material, good projection was slightly hindered. Consequently, rubber cement was used directly on clear acetate. If done carefully by a person with experience, good results would occur when conditions were favorable. The resulting transparency had to be protected and transparentized with the use of a clear plastic spray. Even at their best these transparencies are very tender and can easily be damaged by careless handling and high temperatures.

Through all this experimentation, then, various methods have evolved. One which has proven extremely successful involves the use of heat and pressure. A specially prepared transparent film called Transpara-Film [1] has been developed primarily for converting printed materials to a projectable form. Transpara-Film is a clear acetate coated with a dry adhesive which, when heated and placed under pressure, will adhere

Test for clay-coated paper.

Choose a picture of good quality.

Trim film to size of picture.

to the printed surface of a tearsheet. After the film has adhered tightly to the picture surface it is placed in water. The water soaks through the paper, releasing it from the acetate and leaving the printed ink surface tightly impregnated into the special adhesive surface of the film. This then makes the image transparent and projectable. The resulting transparency is far more resistant to abrasion and heat than the older rubber cement type transparencies.

With the ever increasing use of tearsheet materials in the teaching situation the dry mounting method of mounting pictures has become popular. This same dry mounting press also provides the necessary heat and pressure for the above Transpara-Film process.

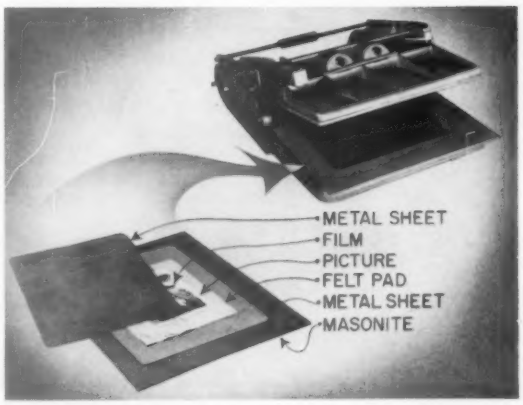
The following steps give a brief description of how this process is possible.

A. To obtain good transparencies by this method it is important to choose a picture of good quality with no abrasions or wrinkles on its surface. It is important to realize that the resulting transparency is the same size as the original picture. Thus, this system will lend itself to the making of the larger size transparencies for overhead and 3¼x4 projectors. Since projection will magnify the printer's screen and blemishes in the original it is never advisable to make slides smaller than 3¼x4 by this method.

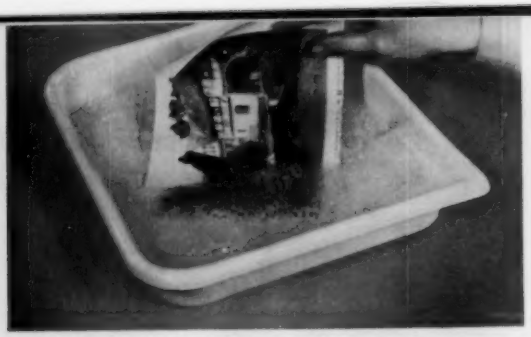
B. For this system of ink transfer to work properly, it is important that only pictures printed on clay coated paper be used. By taking a wet finger and gently rubbing over an imprinted area of the page, the moisture will dissolve the white clay surface. If the paper is clay coated, a white residue should form on the tip of your finger. If this appears, it is quite safe to assume that the ink will be transferable.

C. Trim the picture slightly larger than de-

Dry out picture.



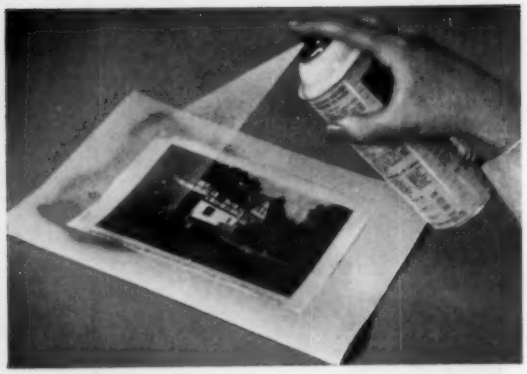
Assemble "sandwich" in above order.



Place film-picture combination in soapy water.

Peel off paper backing.

Wash off remaining clay and paper fiber.



Spray film for greater transparency.

sired and cut a piece of Transpara-Film the same size or slightly smaller so that none of the film will extend beyond the edges of the picture.

D. To assure a good transfer it is important that the picture contain no moisture. Any moisture may be removed by placing the picture in the warm dry mounting press for a few seconds.

E. The press must be set at a temperature of 270° to make transfers. Too little heat will prevent the film from adhering while too much heat will cause blisters to form. To assure good all over pressure and heat a special combination or "sandwich" of materials is important. Most of the elements of this sandwich are readily available in most communities or they may be obtained in kit form. The elements are as follows: (see accompanying diagram)

1. A sheet of masonite to increase press pressure.
2. A smooth piece of metal. (A photographic ferrotype tin is excellent for this purpose.)
3. A sheet of felt.
4. The printed picture facing upward.
5. Transpara-Film with adhesive side against face of printed picture.
6. The last element, another smooth metal sheet with smooth side against film.

Now place the entire "sandwich" into the dry mounting press for 8 to 10 minutes.

F. Place the film-picture combination in soapy water for five to ten minutes. This may require longer time depending upon the quality of clay coating, etc.

G. When water has penetrated the paper surface, pull off the paper backing. Sometimes it pulls off easily; at other times it may have to be removed a small section at a time.

H. With a piece of cotton or a soft rag wash off any remaining white clay or paper fibers or you will not have a good transparency. Wash off any soapy water and allow transparency to dry. Throughout the process the film may have had a tendency to curl. Never force the film to flatten out for you may damage the adherence. However, after the transparency dries it will be relatively flat.

I. Although the resulting transparency will project, an even better projection can be obtained by giving the ink side of the film a light coat of clear plastic such as clear Krylon [2] spray. A light coat of vaseline will also help transparentize the film.

J. The transparency is now ready to mount as desired.

It is important at all times to work cleanly. Dust and lint will cause blemishes if allowed between film and picture surfaces. It is possible to transfer a picture exactly as it exists on the printed page if instructions are carefully followed.

Through the use of this system a great many new and varied materials can be made from your picture file for projection, and for use on light boxes and in diaze reproduction.

(1) Transpara-Film: Seal, Incorporated, Shelton, Connecticut.

(2) Krylon: Krylon, Incorporated, Norristown, Pennsylvania.

Prospective teachers need to practice with modern tools of teaching.

ESSENTIAL OR EXPENDABLE?

AV Courses for Teachers

by J. Robert Murray

HOW essential are courses in audiovisual instruction? Are they necessary, valuable, a waste of time?

In 1949, at a conference of fifteen specialists in teacher education and audiovisual instruction held at the United States Office of Education, four recommendations were made as being of prime importance at that time. They were:

1. That teacher education institutions must make certain that their graduates were prepared to use audiovisual materials in their teaching.

2. That such institutions which did not then have audiovisual center should establish them and use them as laboratories for materials distribution.

3. That they should take the responsibility for helping school systems with in-service educational programs with special reference to audiovisual materials.

4. That teacher education institutions should make use of the most effective instructional materials.[1]

In 1956, not quite ten years later, Benda found the belief prevailed among New Jersey college instructors that students entering the teaching profession could obtain the necessary training in the use of audiovisual materials through incidental classroom procedures rather than from specific courses on the subject.[2] This belief is so prevalent in Pennsylvania at the present time that there is a move on to reduce the present course allotment time or to absorb the audiovisual course into other methods classes.

I. College Staff Opinion Of The Audiovisual Course

A general indication of what teachers college instructional personnel think about the audiovisual course is exemplified in the following example. An audiovisual instructor was approached by a fellow teacher and asked if it would be possible for a student to skip the audiovisual course. It seemed that the boy could already operate most of the equipment. But what does research tell us concerning the preservice audiovisual course in teacher education?

II. Research Studies In Audiovisual Education

A. Beginning Teachers' Needs

White found that school supervisors in the state of Wisconsin believed that beginning teachers should be fully prepared to use audiovisual methods when they leave college. They wanted teachers they selected for their schools:

1. to be acquainted with the materials that apply to the teachers' own fields,

2. to be competent in the mechanical aspects of the materials,

3. to understand and appreciate the pedagogical values of audiovisual methods for producing a more effective learning situation,

4. to know how to use audiovisual materials so as to achieve more effectively their inherent values and

5. to know how to evaluate the methods and results they produce.[3]

The audiovisual specialist would be the first person to concede the difficulty in meeting these objectives, and yet these are the major purposes of every well organized basic audiovisual course in the country.

In conclusion it would appear that the majority of these students felt that the course should be offered for three credit hours to permit better coverage of certain skills and techniques which they thought of potential usefulness when they started teaching. They also felt that the course should immediately precede practice teaching.

B. Utilization of Materials

White found in his study the following items:

1. That as a group (only two had taken an audiovisual course) the teachers surveyed did not use all of the audiovisual materials at their disposal.

2. That those teachers who did use the six common methods surveyed did not perform at the highest levels of usage.

3. That teachers were cognizant of their own deficiencies in the area of audiovisual methods, but only to the point where their

knowledge of the methods would allow them to realize and recognize their deficiencies.

4. That the in-service training programs now found in schools such as those contacted in the study cannot be depended upon to provide competency in the area of audiovisual methods.

5. That all people contacted in the study, teachers and administrators alike, were eager to have teachers better prepared to use audiovisual methods.

In conclusion White recommended that each pre-service teacher take a complete and separate course in audiovisual instruction.[4]

C. Teaching Competency and Utilization of Materials

Camp found in his survey in New York State that, in general, *there is a significant positive relationship between administrators' ratings of teacher competency and the extent of audiovisual utilization.* Although he found no significant relationship between the level of audiovisual training and administrators' ratings of teacher competency, *there was a significant positive relationship between the level of audiovisual training and the extent of audiovisual utilization in the group studied.*

Teachers judged as most competent may or may not have had formal audiovisual training, but they are much more likely to use audiovisual materials extensively than those teachers rated average or poor. The teachers surveyed, in general, felt that the extent of use of audiovisual methods by the faculty in their teacher preparation institutions had some degree of influence on the extent to which the teachers themselves utilized these materials.[5]

This perhaps proves the old adage that we teach, not as we are instructed to teach, but as we have been taught. In one of the state teachers colleges of Pennsylvania, it was found that approximately 21 percent of the total teaching staff had taken an audiovisual course within the past fourteen years. Less than 10 percent of the faculty had taken a graduate course in audiovisual during this period of time, and approximately 20 percent of those that had taken a course were training school staff rather than regular college classroom instructors. This survey may be typical of the United States, but it is doubtful, since Pennsylvania has required audiovisual training since about 1940 and many of the staff members are Pennsylvania graduates. It may be that in other states where audiovisual is not required, the percentage *would not* be this high.

This is not a criticism of the institution, the teachers or their alma maters, but points out the real need for good in-service audiovisual training within teacher education faculties. The remarkable part here is that many of these teachers have taken their time and made great effort to acquaint themselves with these modern tools of communication, rather than be content with the traditional lecture method. It is disturbing that a situation such as this exists in teachers colleges where the personnel involved may determine, through their curriculum committees, what courses should be taught.

Camp also found that the majority of teachers and administrators surveyed indicated that they favored a basic course in audiovisual instruction as a requirement in the teacher preparation curriculum. Of the school administrators surveyed, 97.6 percent felt that this basic course should be required of all classroom teachers.[6] It is worthwhile to note that the administrators' judgments regarding the content of a basic course in this area were in general agreement with the recommendations of the National Education Association and with standard texts in the field. This means that the course would have to meet on the average of three clock hours per week for a full semester in order to cover adequately the goals previously discussed as being basic.

In connection with Camp's study, a step in the right direction has recently been completed by The Pennsylvania Audio-Visual Association for Teacher Education. For several years the members have been working among themselves to prepare a basic audiovisual course of study for all teacher education institutions. The Pennsylvania Department of Public Instruction is publishing and distributing the outline. This is strictly a voluntary course of study, but if it is followed by each teacher education institution, Pennsylvania can be assured that all graduating teachers have had the opportunity at least of studying what is considered most important in audiovisual education.

D. Audio-Visual Course Weaknesses

Benda's study in New Jersey pointed out weaknesses which seem to be typical of many regions in the U. S. These were:

1. That beginning teachers were not fully aware of the various media's contribution to the teaching process.

2. That broad understandings of the various media were deficient in some students even after a preliminary course in audiovisual.

(It may be pointed out that with a class which meets for an hour's credit on Saturday, it is the remarkable teacher indeed who can meet the prescribed goals of audiovisual education.)

3. That there was no established course of study.

4. That classes were too large.

5. That equipment was lacking.

6. That instructors were too busy with other courses or college duties.

7. That the audiovisual courses emphasized operation of equipment rather than effective selection and utilization.

8. That students were not afforded sufficient opportunity to observe the use of the various media in actual practice. (Too often these methods are only used in the audiovisual class as demonstrations, but never witnessed in other college classes.)

9. That colleges have not stressed the importance of audiovisual materials as an integral part of teacher learning processes.

In conclusion, Benda recommended that students must not be expected to receive all their training in the use of audiovisual materials from other methods courses. Certain understandings and skills are taught only in audiovisual education courses. He goes on to say that the basic pre-service course should meet three times per week for one semester.[7]

E. Utilization of Materials in Adult Education

In a study dealing with over 5,000 teachers in the public adult schools of California, Harris found some results very similar to the previous studies. Teachers with audiovisual training used the main materials in ratios of from two to one to three to one over teachers without formal audiovisual training.

A very important finding was that teaching experience had no significant effect on the usage of audiovisual materials.[8] This points out the fallacy of many college professors' viewpoints that the beginning teachers can acquaint themselves with these "audiovisual aids"

after they get out into the field and gain the necessary experience.

III. Audiovisual Training – Separate Course Or Integrated Into Other Methods Courses?

With the impetus of visual sensory methods back in the early 1920's the question arose: should the courses in visual instruction be separate or should guidance be offered in special methods courses?

At first the recommendations by such leaders as Freeman[9], Anderson[10], Gregory[11], and McClusky[12] were that the subject should develop within each methods course. However, by 1932 McClusky had modified his original recommendation to state that a separate course was necessary for emphasis.[13]

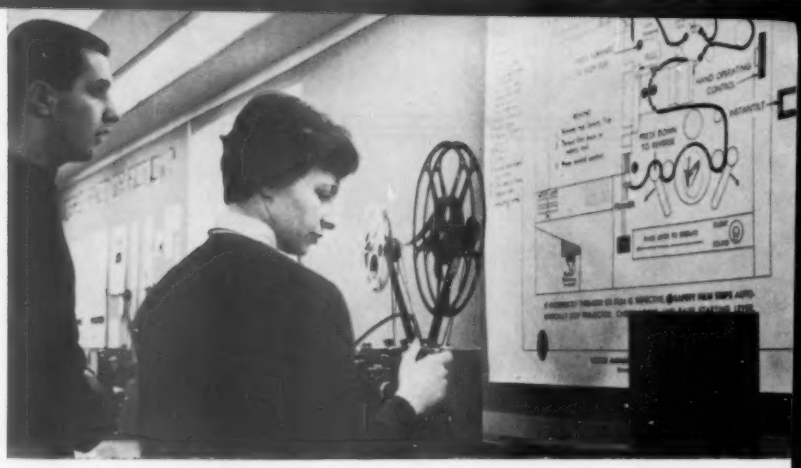
Yeager, in discussing the work offered at the University of Pittsburgh, made the statement that *"Since methods courses do not place adequate emphasis on the use and care of visual-sensory aids, separate courses are necessary so that every prospective and in-service teacher will be brought in direct contact, through participation and application, with visual-sensory aids developed sequentially and practically applied."*[14]

IV. Future of Audiovisual Education

What will the teacher competency in the field of audiovisual education be twenty-five years from now? This is one of the most important present day problems.

Noel points out that even now the quality and variety of audiovisual materials greatly outflank teacher competency in effective use of them. There is statistical proof of our failure to use even a small percentage of educational radio programs. Everywhere you turn there is a valuable source of pictorial materials, yet teacher use of these materials is very limited. Developing teacher competency in the use of these materials is a responsibility of both teacher education institutions and school administrators.

The problem has two aspects, in-service and pre-service training. Teachers colleges have the primary responsibility for the pre-service aspect. Indications are that teacher education institutions are beginning to recognize the problem. The future will bring courses, units, and practice experiences into the teacher training curriculum, which will assure teacher training competency in audiovisual education. Many teacher education institutions will require this work and college instructors will make use of these materials as an integral part of their classes.[15].



In large classes, AV teacher must often rely on supplementary materials.

McClusky states that twenty-five years ago the number of audiovisual specialists with doctor's degrees could be counted on one hand. *Phi Delta Kappan,* February, 1952, reported no less than fifty doctorial theses in progress in the audiovisual field. The number of higher educational institutions offering courses in audiovisual has increased from 21 to over 250 during the last twenty-five years.[16] Moldstad, writing in the *Audio-Visual Communications Review,* indicates that there have been approximately 420 doctoral studies completed in audiovisual education between 1936-1956 and an additional 93 studies completed in 1956 through September of 1957.[17]

What is the future for audiovisual? The facts show that audiovisual education is an integral part of teacher training. The utilization of audiovisual instruction has spread steadily during the past quarter of a century and will continue until the concept permeates education at all levels.

The growing interest in developing more effective media of communication will give impetus to the movement. Another motivating force will stem from the stigma surrounding verbalism. People are becoming more and more distrustful of fancy phrases. They want plain talk and understandable presentations. The establishment of serious graduate study in audiovisual techniques at the university level is a recognition of the need for professionally trained personnel to help in the task of making learning and communication effective. If the schools of today are to keep pace in practice with the techniques of communication in use in the larger community which they serve, studies in audiovisual education are a must for tomorrow.[18]

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AV Coordination in a Large Urban School

by Edward J. Kosell

MANY teachers feel there is too much difficulty involved in securing and setting up audiovisual equipment for a fifteen minute educational broadcast or a short instructional film; in consequence, many children are deprived of the proven benefits of these effective teaching materials.

On assuming the post of audiovisual coordinator of a sixty classroom Chicago public elementary school, the writer decided to make it just a little easier for teachers to obtain and use the school's equipment.

No problem was presented in the use of filmstrip equipment. Several years ago it was decided to have the school library be the distribution center and custodian for filmstrips and filmstrip projectors. Each teacher is given a listing of the several hundred filmstrips comprising the school collection; the teacher simply makes arrangements with the librarians for the use and return of this equipment. Incidentally, it was found that a large standard 3 x 5 card file cabinet can very easily be adapted for the storage of many hundreds of filmstrips. The locking facilities of this type of cabinet and its large size suit it ideally for safe and convenient storage.

On the other hand an analysis of the extent of participation in the reception of radio broadcasts presented by the school system's educational broadcasting station disclosed only a faint, sporadic use of this facility. On inquiry, teachers very frankly stated that too much effort was involved in making weekly arrangements for educational broadcasts. Citing the same reason, even more resistance was found to the use of instructional films.

By showing the teachers that the educational radio schedule was set up so that particular series were programmed on a full year's basis, the writer was able to obtain 100 percent teacher participation in the use of radio equipment for the semester.

Semester schedules were drawn up. A copy of the schedules was given each teacher. Also, each of the school's four radios had attached to it a routing sheet derived from the schedule. In consequence, every teacher in the building can very easily determine the location of any radio at any time during the day.

It was found that scheduling of this type resulted in a number of advantages. Radios leave the office at the start of the day and are routed from room to room by the teachers using the attached routing schedules. Intermediate trips to the office involving equipment handling and the resulting greater chance for damage are eliminated. Also, office personnel are saved the trouble involved in the routing of equipment. The last teacher using the radio is responsible for its return to the office for overnight safekeeping.

Since the radios come to the room on schedule and almost automatically, it is quite easy for the teachers to make good use of them.

The cooperation of the school engineer was enlisted in adapting several heavy radios to "two-man" portability. This was done by attaching a window sash handle to each end of the radio. As a result, even the larger second grade boys can move the radio from one room to another.

Classroom use of sound motion picture equipment for short and purely instructional films also has its drawbacks. Perhaps understandably, so teachers are quite reluctant to make the necessary arrangements and go to the trouble of setting up projection equipment for the usual twelve to fifteen minute film.

It is here that the coordinator can be of invaluable assistance; here that a little effort on his part reaps great benefits for teachers and children. All that is required is some thoughtful scheduling and the providing of that vital spark of enthusiasm.

Films are received weekly from the schools' Division of Visual Education as a result of an order compiled from teachers' requests.

To expedite the formation of the schedule and as a convenience to the teachers, pupil messengers go to the teachers whose requested films were received. These teachers then indicate on an accompanying blank schedule the time and day on which they want their films shown, subject only to the restriction that they select a day on which the projector is on their floor.

Next, the messengers visit all the other teach-

MOVIE FILM SCHEDULE NOV. 17-21

	MON. NOV. 17			TUES. NOV. 18			WED. NOV. 19			THURS. NOV. 20			FRI. NOV. 21		
		RM	FILM		RM	FILM		RM	FILM		RM	FILM		RM	FILM
9:00- 9:30	I 2F	208	X-F-43	I 2F	210	X-S-5	I 1F	105	X-F-43	I IF	117	X-J-4	I 2F		
	II 3F	310	X-A-9	II 3F	320	X-F-43	II GF	010	X-J-4	II GF	012	X-A-9	II 3F	313	X-A-9
9:30-10:00	I 2F	214	X-B-7	I 2F	211	X-U-19	I 1F			I 1F	120	X-M-12	I 2F	219	X-U-19
	II 3F	306	X-A-9	II 3F	316	X-F-43	II GF	08	X-F-43	II GF	016	X-J-4	II 3F	307	X-F-43
10:00-10:30	I 2F	218	X-U-19	I 2F	205	X-A-9	I 1F	106	X-F-43	I 1F	118	X-F-43	I 2F		
	II 3F	315	X-A-9	II 3F	304	X-F-43	II GF	06	X-A-9	II GF	08	X-A-9	II 3F	308	X-M-12

This schedule shows how teacher selections are worked out. Films are designated by catalog number, as "X-F-43" - "X-A-9" - etc. The Roman numbers "I" and "II" refer to the two projectors being used. "GF" - "1F" - "2F" and "3F" refer to the various floors of the building. Teachers may select any convenient period for showing a film on the day that the projector is "tagged" for their floor.

ers, many of whom had requested films that were unavailable that week. These teachers are given the opportunity to book any film that was received, provided the film definitely applies to their program of studies.

By making full use of the school's two projectors, it is possible to provide each teacher with his choice of a period from approximately ninety half-hour film periods each week. Thus, it is evident that a more successful instructional film program can function with only a minimum of equipment.

Employing the technique of attaching its individual routing schedule to each projector and to each film container, the equipment is in a position to move from room to room throughout the day without further attention from the audiovisual coordinator or office personnel. Providing each teacher with a duplicated copy of the master film schedule, enables the teacher to determine where the projectors and films are at all times during the day and the week. This is an invaluable aid in tracing equipment on those infrequent occasions when something unforeseen develops to upset the schedule.

For a school of more than one floor, it is advisable to set up the schedule so that the projector remains on one certain floor for at least half the day. In this way, equipment is rolled quickly and smoothly on a projection cart from one room to another on a floor and constant carrying of the projector from one floor to another is greatly lessened.

The method of setting up projector routing and film routing schedules from the preceding "master" schedule can easily be deduced.

The advantages of a permanently mounted projection screen in each classroom over those of a pupil-managed portable type need no discussion.

It is of course highly desirable that each teacher become proficient in the operation of audiovisual equipment. The writer has found a good time to train teachers in the operation of equipment is the period in the morning before the pupils enter the classroom or during a lunch hour. No more than two teachers can be trained properly at a given time.

Incidentally, the writer has found that from the standpoint of getting the program off to a good start each day it is advantageous to organize a small group of boys whose task is the delivering of radios, motion picture projectors, and films to the first-listed teachers on each day's schedule. As previously explained all movement of equipment thereafter is under the management of the teachers. As with the radios the last teacher using the films and projectors each day is responsible for its return to the office for safe-keeping.

The delivery boys are only too glad to help and are proud of their contribution to the smooth running of a successful audiovisual program. Too, since this job of delivery can be performed before classes start, no loss of instructional time need be suffered by the boys.

Naturally a certain initial effort had to be put forth to put this plan in operation. However, after a few weeks the rough spots were ironed out and a very satisfactory program has resulted. Although a very large number of teachers and 2600 children benefit from this service, a minimum of attention is required from the coordinator. Indeed, it is to a very large extent a self-sustaining operation.

The foregoing is an account of an audiovisual program that has worked out very well in a given situation. Some aspects of this program doubtless can be used with profit in many other situations.

FILM EVALUATIONS

by L. C. Larson and Carolyn Guss

Beginning Responsibility: Books and Their Care

(Coronet Instructional Films, Coronet Building, Chicago 1, Illinois) 11 minutes, 16mm, sound, color or black and white, 1959. $110 or $60. Teacher's guide available.

Description

A number of guiding principles for taking proper care of books and using them correctly are presented for the young neophyte reader.

It is Bobby's birthday and his grandmother offers to buy him any book he chooses in the large bookshop. Bobby is amazed at seeing the many books but finally selects *The World of Pooh* by A. A. Milne because his teacher reads stories from this very same book all of the time. He can hardly wait to get home. Grandmother has bought a picture book for Sue, his little sister, and, as they gather in the living room, the excitement runs high as mother, father, Sue, and Frisky the dog wait to see what they brought from town.

When father sees the title he remembers a book that he has had for over thirty years and he gets it from the bookshelf. It is *Winnie-the-Pooh* and is still in excellent condition. He shows Bobby how he took care of the book to have had it so long. First, he illustrates how to open a book so as not to break the stiff back or binding. As Bobby imitates his father's actions, little Sue also learns how to open her book correctly.

Bobby wants to read his book but it is suppertime and he must find a place to put it so Sue won't tear it accidentally or Frisky won't pull it off onto the floor. He can hardly wait to finish eating his dessert. When he does finish, however, he knows that he must wash his hands and pick up all stray crayons and pencils so that his book won't get smudged or have crayon and pencil marks on it. Sue washes her hands, too, and helps to pick up all of the crayons. They are very careful when turning pages and, at bedtime, Bobby uses a piece of clean paper as a marker. This doesn't hurt the book. He, also, must find a good place to keep his book. The bookshelf is just the place – just high enough so Sue can't get it and the book can stand upright and not fall to the floor.

The next day, Bobby takes his prized book to school to share with his classmates. Miss Johnson is very interested and offers to show it to the entire class, however first, she shows them another book which was left out in the rain, had torn pages, and crayon marks all over the pictures. The narration asks, "Did somebody's little brother or sister do all this to what was once a new and clean book? No. Someone who was in this room last year did it. The way some boys and girls treat books, you'd think they were little children."

While getting a book from the shelf in the reading corner, Judy accidentally knocks a book to the floor and a page is torn. She immediately takes it to Miss Johnson who understands that accidents do happen and is pleased that Judy brought it to her at once so that she could repair it before the tear gets worse.

Bobby is happy that he knows how to take care of books, because they are such good friends.

Appraisal

Beginning Responsibility: Books and Their Care fulfills a much needed role in the guidance of primary school children. In addition, by example, it illustrates that younger children in a household are influenced by what the others in the family do. The narration and visuals are kept at a level which makes it easy for primary children and younger to understand the basic procedures for caring for books and other niceties such as saying "thank you" and reporting accidents promptly. The film does not attempt to funnel information, but successfully demonstrates by example the several rules for book care.

– O. E. Bissmeyer, Jr.

The Face of Red China

(McGraw-Hill Text-Films, 330 West 42nd Street, New York 36, New York) 54 minutes, 16 mm, sound, black and white, 1959. $225.

Description

This portentous film produced for CBS-TV shows how enthusiasm and idealism, as well as regimentation, are weapons in the hands of the Red leaders who exhort and coerce China's millions with Mao Tse-tung's promise of Utopia: "Three years of hard labor for one thousand years of happiness"; and, what Red China has accomplished and hopes to accomplish by her "Great Leap Forward."

However, since American journalists and news cameramen are forbidden to travel in Red China, this discerning film was shot by Rolf Wilhausen, a West German news photographer, and the text was narrated on the scene by the Canadian Gerald Clark, of the *Montreal Star*. In addition there is further text and discussion by Clark and Walter Cronkite, who cogently discuss the implications to the West of this thoroughly aroused dragon of Red China.

Reel one devotes itself to the rural communes first set up in April of 1958. In this galvanic uprooting of the traditional Chinese family, four-fifths of China's 500 million peasants or 120 million peasant families are packed into some 26,000 communes. This mass military impressment of peasant families into barracks life and exhausting labor on collectivized land apparently far outdoes the totalitarian zeal of the Soviet Union in intensity. Here, with bewildering and fanatical zeal, dams are completed in 80 days – the tools for the most part, the bare hands and straining muscles of hundreds of thousands who under mesmeric regimentation heed the slogan, "Do not wait for the machines, develop small industries."

For example, in a commune significantly named "Sputnik" women laborers scour the countryside for iron ore and scrap metal which they process into pig iron in crude homemade blast furnaces. Furthermore, no one escapes this gigantic and all pervasive sociopolitical movement. All students, office workers, and nurses are required to contribute work in the communes after hours and on vacations. Moreover, the traditional role of women with the three cares no longer exists. She now sends her children to state communal nurseries leaving herself free for mechanic duty in tractor service stations, tending the backyard blast furnaces, building, farming, etc. In short, her primary duty is now to the "people" and not to the family which has long been the crux of Chinese life.

Work in the fields for both men and women begins at dawn and lasts until sundown. The children volunteer for work once a week while the university students volunteer during vacation. The latter is one way the regime combats the tendency of intellectuals to look down on manual labor. And manual labor it is, for most of the work is accomplished by primitive

hand and back methods – the only respite being an hour of military drilling following a half-hour lunch break.

Significantly, the entire movement is shot through with unceasing and ubiquitous propaganda for the state and the system. Children parade through village streets chanting "Socialism is best" and "Taiwan must be liberated." Indeed, public demonstrations as a means of propagandizing the populace in village or city are held on the slightest provocation. Many of them are anti-Western rallies protesting United States and the West policies. Today, however, more refined and persuasive methods are employed; "We do not chop off heads now. We reshape them." Thus, "painstaking reasoning" according to Mao is utilized in this constant indoctrination, which downgrades intellectuals and professors.

Reel two limns the impact of the new China on that of the old. Here, Peiping, the Imperial and Forbidden City of the decadent Manchu emperors, has become the capital of Red China. Here, the summer palace of the Manchus is now "The People's Park and Cultural Center." Here, T'ien An Men Square is Peiping's equivalent of Red Square in Moscow. Here, also, the Chinese avow they will build a new capital by the tenth anniversary of the People's Republic.

Instead of downgrading all of China's past, a concerted and vigorous effort is now being made to inculcate national pride in China's old and rich culture. After all, gunpowder, paper, and movable type were contributions of the old China and should be rightly acknowledged. Apropos of China's lag with the West they say, "We may be behind you now but it wasn't always so" – the implication being we will soon catch up and surpass you.

Shanghai is again open to trade. However, now one finds along the famous waterfront Bund only 5,000 foreigners as compared to the over 30,000 of pre-revolutionary days. There are still widespread slums but less litter and odor due to the constant emphasis on sanitation and the call to clean up such perennial scourges as rats and flies. Older people are given jobs of checking on the cleanliness of streets and houses.

A most important educational reform of Red China is the abolition of the intricately complex and symbolic alphabet and the substitution of a romanized one. Thus, all the oncoming generations will be trained in this new and simplified language system, all of which will undoubtedly raise China's literacy rate.

Apropos of the industrial change and economic offensive, the "Great Leap Forward" has been due to the limitless human energy of China's millions. The statement of Marx, "Twenty years are concentrated within one day," is not an exaggeration, for here one finds literally thousands of backyard blast furnaces which represent the new industrial China. Here, too, a cyclotron where ten years ago nothing existed. Why are whole armies of people content to be moved from place to place in this prodigious and unrelenting drive to industrialize? Perhaps it is a sense of patriotism and achievement.

Perhaps the epitome of Red China's industrialization is found in the great Anshan steel mill in Manchuria which turns out high grade steel, so vital a factor in the export offensive of cheap goods for southeast Asia. China seems to say, "Anything the West can do, we can do better." Here the nationalism, chauvinism, and xenophobia of the new China reside.

Russia's reaction to all of this? She who helped to industrialize Manchuria

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now looks on with awe and apprehension and no longer sends as many technicians as formerly.

The final sequence of the film deals with two long-standing issues, namely: the Formosa question and Red China's admission to the United Nations. In answer to both of these, China states that "Time is on our side," and that ultimately the United States will withdraw from Formosa and Red China will enter into the United Nations. Moreover, there will come a day after the death of Chiang Kai-shek when Red and Nationalist China will be reunited. Thus for the present the communist revolution in China seems to be giving China the food and security she currently needs.

Appraisal

This film, which admittedly does not include all facets of the emergence of the new and industrialized China, does make a valuable contribution toward our understanding and, most important, our not underestimating the Chinese dilemma. Indeed, by its perceptive filming and cogent text it presents, perhaps, the best up-to-date overview of what Red China is about. Moreover, with an ideology that promises standards of living and a fair share of the "good things of life," the Chinese Communists have developed, and may be able to maintain, considerable support for their form of government for at least a generation or more. All of which is to say that this presents serious problems for our country and the West.

— Robert B. Pettijohn

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(How Nature Protects Animals—second edition)

(Encyclopaedia Britannica Flms, 1150 Wilmette Avenue, Wilmette, Illinois) 11 minutes, 16mm, sound, black and white, 1959. $60. Teacher's guide available.

Description

The film opens by showing that animals are struggling constantly to survive in the midst of such hazards as fire, flood, heat, cold, disease, changes in the climate, and other animals that prey upon them. Some species do not survive, such as dinosaurs and passenger pigeons, while others withstand the climate, escape their enemies, and survive over long periods of history.

Several examples illustrate how nature helps animals survive by protecting them in various ways. The distasteful moth is spit out by its frog captor; the keen senses of the deer help it to escape its enemies: the fertility of insects helps some of them to survive and continue the species; the buffalo, osprey, scorpion, and other animals protect and care for their young until they can put up a good fight for survival on their own.

The defensive adaptations of animals are shown as belonging to three classifications—hiding, fleeing, and discouraging attack. The first type is exemplified by a frog hiding under a log; a crab burying itself in the ocean sand; prairie dogs fleeing to their underground homes, while the protective coloration of butterflies, toads, praying mantis, rattlesnakes, and other animals hide them from their enemies.

The second type of defensive adaptation of animals — fleeing — is illustrated by showing various types of locomotion used by animals: the antelope flees by running, the kangaroo hops, the seal swims, the snake crawls, the opossum climbs, the egret flies. The film also shows an owl and woodpeckers sheltering themselves in holes in trees.

The film continues by picturing a porcupine discouraging attack by using its sharp quills and shows that a bee achieves the same result with its stinger. The Viceroy butterfly mimics the Monarch and escapes being eaten by birds; the remora fish attaches itself to the bottom of a shark thus obtaining protection and portions of the shark's food. It shows a skunk discouraging the attack of a fox by use of its effective defense weapon, then pictures the well camouflaged sphinx moth larva which displays a special eye-like marking when disturbed. Next, it shows an armadillo with its protective, tough, horny plates and the harmless hognose snake acting as if it could inflict great harm. The protection of the diamondback rattlesnake is obvious as the film pictures it striking.

As the film concludes with a review montage, the narrator tells that through the defensive adaptations just shown and many others nature has kept alive an endless variety of animal species through countless ages of the history of the earth.

Appraisal

This interesting film clearly presents a variety of examples which illustrate important biological principles concerned with animal adaptation for survival. The visuals should command the attention of a wide audience range from primary grades through adults but the film will probably have its greatest use on the intermediate and Junior high levels in general science and biology. It will also be useful to the teacher of senior high biology when uncovering units concerned with animal survival. Although not directly concerned with extinct species, the film should stimulate some thinking concerning these and the species that are nearly extinct, such as, the ivory billed woodpecker and the whooping crane. It will also be useful in discussions concerned with existing primitive forms of life, such as, the lungfish and sowbug, but its greatest use will be to show some of the adaptations which make it possible for animals to survive their many natural hazards. Since a wide variety of specific examples is shown, some teachers may wish to use the film to help develop in their students the ability to reason inductively.

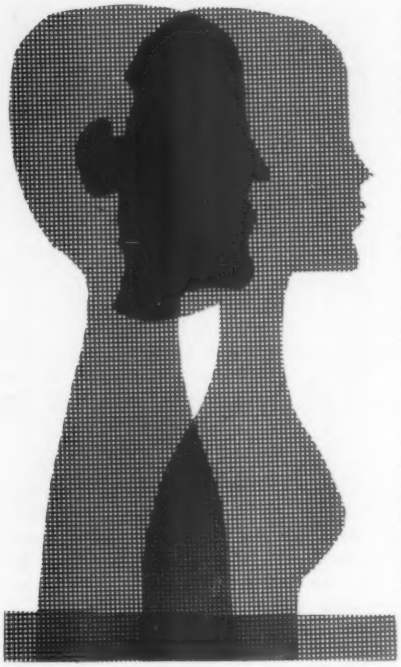
— George Vuke

Rhythmic Motions in Growing Plants

(William M. Harlow, 115 Terrace Road, Syracuse 10, New York) 11 minutes, 16mm, sound, color, 1959. $90.

Description

This entire film uses time-lapse cinematography to show the circular motion of plants as they grow, the effect of gravity on their direction of growth, their reaction to light, diurnal



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changes, and the motion of climbing plants as they seek support. The amount that the action is speeded up varies from 1,000 to 5,000 times.

Rhythmic Motions in Growing Plants opens by showing the sprouting of barley seeds and the waving of the growing plant from side to side, which motion, the narrator explains, is called circumnutation or nodding in a circle. Animated diagrams of the movements of a growing nasturtium show that these circular movements form a spiral that increases in diameter as the plant grows upward. The film continues by picturing the movement of growing ash tree leaves and uses the hepatica to show that both flowers and leaves circumnutate. The undulating motion of roots is shown as they grow from a willow twig.

The next sequence shows the reaction of plants to light. It pictures the closing of clover leaflets at sunset and their spreading again in the morning. The leaves of the lupine react in a similar way.

The film shows the effect of gravity on a potted bean plant that is placed in a horizontal position. The plant curves until the tip of the stem is growing in a direction opposite from the earth's gravitational pull. The effect of gravity on the roots is opposite to that on the growing stem. The plant is placed at various angles and each time the roots bend and grow in the direction of the pull of gravity.

Movements of climbing plants are next shown. The morning glory has a clock-wise, circular motion as it searches for a vertical support. It is shown circumnutating around a suspended string, exerting enough force to move the string and finally wrapping its tip around the string and using it for support.

The scenes that follow show the tendrils of the wild cucumber as they lash out like whips in all directions; the plant itself moves very little. The tendril finds a support, twists, acting like a turntable, and draws the plant over to the support.

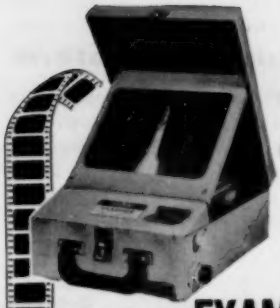
The film concludes by suggesting to the viewer similar observations, explorations, and experiments which he can perform in this interesting field of plant growth.

Appraisal

This fascinating film can be used in a variety of ways with audiences that range from elementary grades through college. Also, it will open new avenues of exploration for the week-end botanist. The use of time-lapse photography results in a dynamic presentation that is possible only through the film medium. This film will assist in stimulating the viewer to further study and experimentation concerning plant behavior including their tropistic reactions to water, light, gravity, contact, and chemicals. It may also be used to show that plants, as well as animals, move and respond to stimuli, two of the characteristics of all living things. The visuals clearly show the various motions of plants; consequently, some teachers may choose to use the film without narration to assist in developing skills in concept formation. After studying the visuals, the viewers could form hypotheses concerning the behavior of plants, to be further tested by the conducting of controlled experiments. More advanced groups may wish to study the plant motions more critically at slower projection speeds.

—George Vuke

Please send films directly for reviewing to Dr. Carolyn Guss, Audio-Visual Center, Indiana University, Bloomington, Indiana.



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FILMSTRIPS

by Irene F. Cypher

In one of the reviews in this column we call attention to the fact that the producer includes a final frame calling attention to the fact that the teacher might reshow the strip after an interval of three to five days. This is a very good thing to emphasize—if by "reshow" we understand that "reshow—use" is included. It would almost seem that the time had arrived when it was unnecessary to repeat this, but apparently we have not reached the millenium yet. You do not always get immediate returns from one projection-use of a filmstrip; indeed the whole value of filmstrips to me, lies in the fact that you can so easily go over and over the material to meet the needs of pupils of all types. Of course there are many times such repetition is unnecessary, and would only result in a wave of boredom and sluggishness in pupil interest. But the heart and soul of filmstrip utilization technique is this matter of potential re-use and controllable-speed use. So often it has been said that repetition of a phrase or sentence is a means of achieving emphasis. Well if it is true in one instance, it is just as true in another. Please, do not look upon filmstrips as "one-time projection" materials; do recognize them for what they are – continued and continuing use materials that can be called upon time and time again.

Artists of Holland

(2 strips, color; produced by Encyclopaedia Britannica Films, 1150 Wilmette Ave., Wilmette, Ill.; $12 per set, $6 each.) Vincent Van Gogh and Rembrandt Harmenz. van Rijn are the artists in question, and our visual visit with each provides us with examples of their best known paintings. As such, of course, the filmstrips are valuable because they enable teacher and pupils to see these masterpieces under classroom study conditions, and allow time for leisurely examination and study of details. Perhaps our own years of museum work make us partial to such materials. If you have ever watched groups of students visiting museum exhibits, you know that frequently so much is seen on these visits that the full impact or value of the collections is not fully realized. Filmstrips such as the ones here reviewed provide a basis for follow-up of museum trips, and, in this case bring into the classroom many items which are not included in our own museums. These are the equivalent of a tour of many museums in many parts of the world and the student of art will find much that is interesting in the details and examples of the work of both artists.

Adventures in Communicating

(4 strips, color; produced by Filmstrip House, 347 Madison Ave., New York 17, N.Y.: $20 per set.) So many phases of modern life are dependent upon proper and adequate communication between people that it is extremely important to understand the basic rules of sentence structure. The four strips of this series go into a rather thorough explanation of what constitutes a sentence, how to lend variety to your sentences and how to observe the amenities of grammatical do's and don't's. At the end of each strip the producer suggests that the teacher reshow the strip after an interval of three to five days. Certainly this is a must with material of this type, for it is produced to serve as help in an evolving process. Correct use of language forms is a skill gained over a series of lessons and these strips should be used not once, but many times.

Canada and Pacific Coast

(9 strips, color; produced by Curriculum Materials Corporation, 1219 Vine St., Philadelphia 7, Pa.; $3.95 each lesson, rental $1 each.) Like our own country, Canada includes a vast area, with many regional resources and scenic spots. Emphasis in this set is on such items as aluminum, oil, furs, forests, grain farming and fishing in the western provinces and Pacific coast area. We are also shown some of the famous vacation spots that drew visitors to Canada. The material is adapted to units in regional geography and for general social studies. Although Canada and the United States share many things in common, still there are special features of Canadian life and economic development which make it essential to understand the people of this northern neighbor, and this series will help to achieve this.

Cendrillon

(single strip and record, color; produced by National Film Board of Canada and available from Stanley Bow-

mar Co., 12 Cleveland St., Valhalla, N.Y.; $11.00 with record.) The story of Cinderella is a long time favorite, but it comes to us this time with captions in French and a recording in French dialogue. The art work of the filmstrip is delicate and appealing and provides a truly fairylike quality. The dialogue naturally provides an opportunity for gaining facility in the use of a foreign (or should we say "new" language). If language study is to have meaning and value, then we personally think material of this type is to be highly recommended. There is more to language than grammatical structure and parts of speech. We need to hear a language spoken; to hear it in the context of a story or conversation; we need to hear the shadings and nuances of its tonal qualities and rhythm. Certainly this is an excellent filmstrip for such purposes; it provides both the literary story and the record for language study, and can be recommended both for literature classes and for French study classes.

How We Get Our Clothing

(4 strips, color; produced by Society for Visual Education, 1345 Diversey Parkway, Chicago 14, Ill.: $16.25 per set, $5 single strips.) Without cotton, wool, leather and rubber we would have a serious problem in providing clothing to protect us and to service all our needs. In this instance we see exactly how the basic materials are secured, what animals or forms of plant life supply the base stock, and how the material is processed, from a bolt of cloth or a piece of rubber to the yard goods and boots which we select. Emphasis is placed on the important part played by machines in processing these products. The strips are said by the producers to be for social studies in grades 3 and 4. We think there is considerable information that will be both interesting and profitable for use in higher grades in home economics units dealing with clothing and for consumer education.

Trucks Work For Us

(single strip, black and white; produced by and available without cost from Automobile Manufacturers Assoc., 320 New Center Building, Detroit 2, Michigan.) If you stop to think about it, it is hard to imagine what life today would be without trucks. Trucks bring us food, clothing, manufactured goods, building materials with which to construct our homes. In fact, as our picture story tells us, "practically everything we eat, wear or use is carried at least part of its journey (from source to consumer) by trucks." There is considerable helpful information in this strip for use with any unit dealing with transportation.

True Book Filmstrips of Natural Science and Physical Science

(two series of six filmstrips each, color; produced by Children's Press, Inc., Jackson Blvd. and Racine Ave., Chicago 7, Ill.; $28.50 per set of 6 strips; $4.75 single strips; $9 per set for unit of 6 correlated books.) This is a project designed to correlate textual or book material with filmstrips. The material is planned with second grade reading level vocabulary in mind and is for the primary and early grade science work. The natural science series includes stories about animal babies, birds, insects, plants and trees. The physical science series includes "Air Around Us," "Deserts," "Moon, Sun and Stars," "Oceans," "Rocks and Minerals," "Seasons." The filmstrips can be used independently of the books, but the units are well coordinated. The facts included are simple and there are suggestions for simple projects and experiments.

Opera and Ballet Stories

(6 strips, color; produced by Jam Handy Organization, 2821 E. Grand Blvd., Detroit, Michigan; $28.50 for set of 6 strips, $4.95 single strips; $21 for set of 6 records, $3.95 for single records.) One has only to examine the reviews in current newspaper columns to realize the extent to which opera and ballet have increased in popular appeal for all age groups. As art forms, both mean more to us when we understand both story and music. This series gives us *Lohengrin, The Magic Flute, Aida, The Barber of Seville, The Mastersingers,* and *Coppelia.* The accompanying records provide narration and thematic music on one side, and complete musical score on the other side. Of course, the filmstrips can be used with any desired recording, but the set as constituted has much to offer. Without wishing to minimize in any way the value of this material for school and educational groups, we have always wondered why more people didn't have projectors and record players at home. Personally we think there is enjoyment as well as education in this filmstrip-record series; the visual adds to the musical enjoyment.

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AUDIO

by Max U. Bildersee

As you read these words, do you hear them, too?

Children reach school age definitely audio-oriented to information transmission. Audio is their means of communication and their understanding of sound is vital to their success in school – from the date of arrival.

Through the first few years of schooling we as teachers take full advantage of the audio training given to the child at home – and through the skills acquired from the first day of life we build new skills – the skills of seeing . . . of interpreting . . . of understanding . . . and even of reading.

The child reads sound. The child hears the words read to himself and understands. One of the first skills taught in school is that of hearing – hearing through the eyes!

With the progress of the years in school audio skills need (it seems to some) no further training and are overlooked. The eye has become all important. By the time the child has reached the fourth grade much information is transmitted through the eye and reading skills are stressed. But the child, in his reading and in his writing, continues to "hear" the sounds he sees or creates on paper, and his audio training continues.

The eye continues in dominance through the elementary school as it is presently constituted – and in the junior high school ear training becomes important again until, by the time the twelve year educational experience is completed, both eye and ear have been trained as receptor senses – and have been given "equal time" and "equal billing."

The only remaining fallacy to be conquered, then, is the constantly enlarging area for audio communications in adult life. And, as many "hear" this through their eyes by translating the words and syllables from sight to sound for comprehension they are proving only that through the school years the eye and the ear must be trained to work together to help the individual achieve understanding – or education fails.

Major modern communications media, when they are effectively employed, rely on both aural and visual comprehension. The sound motion picture (when was the last time you saw a silent film?), the television programming and indeed our daily surroundings are not audio – not visual – they are audiovisual.

As hearing through the eye has become common – so has reading through the ear. That sound we heard is interpreted into a visual image – the coin falling, the key in the lock, the auto passing down the street, the airplane passing through the sound barrier. We hear the sounds – we see the sight.

And we listen to recordings. To music we add the atmosphere of the concert hall – or the campfire, whichever is appropriate. To speech we add the complement of the political rally with all its visual confusion, we add the solemnity of the formal reading before an audience, we add the thrill of the theatre. Thus do we see through our ears.

But only through the eyes and ears in concert do we as teachers instruct – do our students learn. And our responsibility as teachers is to encourage audiovisual comprehension – not audio, not visual – but total audiovisual understanding.

Harcourt, Brace is expanding its publication services to include the publication of essentially audio materials. This is progress toward the ideal of distribution of the word of men not only in cold print, but also in their own inflections. Particularly we refer to an exceptional, unusual, and highly worthwhile record, "THE SCIENTISTS SPEAK: BIOLOGY," recently announced.

George Gaylord Simpson, Professor at Columbia University, discusses "What Biology Is and What It Means to Me." The Research Professor of the Photosynthesis Project in the Department of Botany at the University of Illinois, Dr. Eugene Rabinowitch, discusses "Photosynthesis and You." When he says to his audience, as he opens this discussion, "Fundamentally, you and I, and all other men, as well as all animals, are parasites," we are immediately struck with man's role in the total environment which he has adapted to his needs. Dr. Rabinowitch's informative discussion of photosynthesis can be profitably heard by all biology students from the junior high school through college. And he issues the challenge to all his listeners when he concludes by saying, "As yet, we do not know how to convert light into chemical energy, or how to build up organic matter from inorganic raw materials, something plants do all around us all day long. What a shameful ignorance, and what a challenge!!"

Dr. René J. Dubos, who is now engaged in one of the most forward-looking phases of medical research, is perhaps best known for his research leading to the isolation of several antibiotics. His contribution to the recording, appropriately, deals with "The Infinitely Small: Microorganisms in Human Life and in Science." Dr. Dubos discusses his own experiences in research, credits Louis Pasteur with reporting to and startling the scientific world with a biological explanation for old chemical processes such as the fermentation of grape juice, the souring of milk and the production of vinegar. And Dr. Dubos repeats reasserts what Pasteur was fond of saying, that "the role of the infinitely small is infinitely great."

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– A WORLD OF SOUND ON FILE –

The 1946 winner of the Nobel Prize in Medicine, Dr. Herman J. Muller, discusses "Genes – the Core of Our Being." Dr. Muller refers to knowledge – particularly the knowledge of our inner being and its manner of reproduction – as "powerful," saying that it "can be used for great good – or great harm."

Julian Huxley begins his discussion of "Living Things" by saying, "Even as a small boy I was fascinated by the strangeness and variety of living things – animals and plants. And ever since I began studying biology, I have wanted to find out more about why living things are as they are – why they are so varied and so strange." Dr. Huxley discusses evolution and refers to Man as the latest dominant type because "of his bigger brain, his intelligence and his imagination. These new mental powers made it possible for him to do what no animal is capable of – to discover more and more knowledge about the world and about himself, and to accumulate knowledge and ideas by handing on the results of experience from one generation to the next."

"Thus," says Dr. Huxley, "man can plan ahead in a purposeful way." He adds that, "Barring accidents, we men have many millions of years ahead of us."

This entire exceptional recording is worthy of the attention of science staffs for introduction piecemeal or totally in class – or for assigned listening.

New literature in the field of audiovisual education is always eagerly awaited and the second edition of James S. Kinder's AUDIOVISUAL MATERIALS AND TECHNIQUES* is no exception. The second edition is considerably expanded over the first – and brings valuable information to students and audiovisual practitioners alike.

Particularly, we found the variety of information in the chapter "Educational Recordings" to be broadly conceived, well researched and authoritatively presented. In this chapter Mr. Kinder traces first the history of the phonograph from Edison's historic "Mary Had A Little Lamb" to the present multi-speakered stereophonic machines. Dr. Kinder discusses the problems of the values to be attained by teaching with records and transcriptions. He discusses not only the types of recordings available, but also techniques of utilization and correlation of recorded material with other materials.

Dr. Kinder summarizes the problems of selecting equipment, caring for it and for records and lists sources of recorded materials. Dr. Kinder delves into the unique qualities of tape recordings, mentions some of the machines on the market, discusses editing and splicing and lists a variety of educational uses for magnetic recording devices.

The progress of the audio field is so rapid that the manuscript for this book, completed months ago, cannot adequately treat the developing area of stereophonic sound . . . indeed there is great need for research into the contributions of this new development in education as well as into the ultimate contributions of language or listening laboratories to the total educational scene.

**AUDIOVISUAL MATERIALS AND TECHNIQUES, Second Edition, by James S. Kinder of the San Diego (California) State College is published by the American Book Company, 55 Fifth Avenue, New York. It is intended to meet the needs of students, teachers in service and directors of audiovisual programs. Each will find portions of the book extremely useful.*

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AV IN THE CHURCH FIELD

by William S. Hockman

Editorial Notes

The other day, the same old bogey: "We used that film once in our church. Is there something new?" Yes, of course there are new films. However, any film good enough to be used once with one group is plenty good enough to be used with another group—unless every one in your church saw it the first time. That's not very likely!

☆

The 'missionary' study themes for 1959-'60 are: "Africa" and "The Church in Town and Country." Early in the fall churches will be asking for the films which relate to these themes, especially *None Goes His Way Alone* (the need of people to live and work and play together), and *The Harvest* (portraying the problems a rural pastor must face). Both are 30 minutes, and B&W, and (ought to be) available through your local AV dealer. *New Faces of Africa*, 30 minutes, will soon be released. Also investigate these titles: *Family of Ghana*, 29 min.; McGraw Hill; for general audiences. *Beyond Brick and Mortar*, 32 min.; color; returning missionary reflects on what he accomplished; UCMS, 222 S. Downey, Indianapolis 7. *Congo Journey*, 30 min., Methodist; overview of missions in Congo. *Challenge of Africa*, 30 min.; B&W, several years old, but good. (More titles in September issue).

☆

At every meeting of local church and church school workers we attend it is obvious that no or little AV knowledge and understanding is reaching these people. Why? Denominations are failing, the local councils of churches are neglectful, the local church can't lay its hands on leaders with know-how, and AV material of fine quality, and costly, goes little used or not at all. Who needs to wake up first?

☆

We can't give you our reasons here but we found the Moody Institute of Science (Los Angeles 25) filmstrip series, "Building A Better Sunday School," a sensible and helpful presentation, and priced right ($24.00 for the four filmstrips and 2 LP records).

☆

The two weeks of July 20-31 we will be teaching Ed.260y, Audio-Visual Communication in Religious Education (3 hrs.), in Syracuse University, and cordially invite even those slightly interested to confer with me or the University about this course. It would be a joy to have you in my class, Gentle Reader!

☆

We like the theme, "Improving Christian Communication," for the 16th (can it be that many?) annual International Conference on Audio-Visuals In the Church, to be held at Green Lake, Wisconsin, September 6-11, 1959. The Second National Executive Consultation will run concurrently. For the top brass there will be Consultation Laboratories for the lesser brass, Conference Laboratories. In both instances, some tough questions are to be dealt with realistically. Detailed information from DAVBE, 257 Fourth Ave., N. Y. 10.

Geriatrical

The Proud Years shows in considerable detail the practical steps that can be taken to help old and infirm people lead active and useful lives. Being active and useful, they will be satisfying. Now the intended audience for this film is primarily those who have responsibility in an institutional way for the aged and ill. But, such a film as this can lift the ceiling of understanding for any one in your church, club, or group—young or middle-aged. Churches can use this film to educate board members and families on how to understand and aid effectively older people within the family and community. The setting for this film is the Home for The Aged and Infirm Hebrews of New York. It has a running time of 28 minutes, and is available from the Center For Mass Communication. 1125 Amsterdam Ave., New York 25.

Changing Alaska

In a 30-minute color documentary film, *Alaskan Discovery*, we see what is happening to the church in Alaska. A native Christian, English speaking, is being interviewed by a States-side visitor and the camera takes us out to see what they are talking about; village way of life changing; migration to larger communities; unemployment; settled church-people uneasy in the presence of the newcomers; no one knowing just what move to make, or who should move first; vice and its victims; lack of leadership and know-how in the churches. The sequences are good; the impression lasting; a good film for use in family-night and missionary education programs. Thirty minutes; good photography; forceful commentary—a useful film of fine qualities. Produced by Cathedral Films, Inc., and widely available through local film rental libraries.

One Book—Many Languages

We used to say, there ought to be a film showing the churches how the American Bible Society, acting as the agency of the churches, translates, prints, and distributes the Bible in all parts of the world. Now there IS such a film, *Bearer of The Book*. It's in color, with a running time of 27 minutes. In a lively manner it tells us how the problems of translation are solved so that the Bible today is available in 1100 languages and dialects. We see patient scholars skillfully working out an alphabet for the language of a remote people. Then, with the language in written form, the translation can begin—word by word, with great care to get just the right native word to convey the Biblical meaning. No easy task, when it is remembered how much of Biblical thinking is profound.

We are shown translation "fieldwork"; shown the publication and printing process in N. Y.; and then see distribution on near and distant fronts. An excellent, interesting, informative film just the thing for family-nights, for youth and adult clubs and fellowships, and for church school teachers. Warmly recommended. From the A-V Dept., American Bible Society, 450 Park Ave., New York 22, N. Y., and the service fee is $4.00.

Parable Films

By the recent release of *Tumbleweed Man* and *The House That Hun-*

ter Built, Family Films, Inc., brings its "Modern Parables" series to nine titles. These two have good technical qualities, a running time of 30 minutes, and a rental of $9.00 for black and white.

The first film puts the parabolic saying concerning the tree and its fruit in a modern setting. Larry and his wife and baby, on the move from job to job, are befriended by a Christian couple who operate a filling station and motel. Their faith supports these young parents when trouble (quite imaginary, it turns out) strikes and helps them settle down and face life.

The second film shows us two families: one on the right side of the tracks, the other on the wrong—as Mr. Hunter, successful, self-assured, and very casual about moral and religious values, neatly orders the world. His daughter has been taught to go after what she wants. Coming from the other family is a fine son, brilliant student and the inheritor of very fine standards. But, he is not nearly good enough for Hunter's daughter. When tragedy hits both families, one crumbles and the other stands.

In both films there is a strong evangelistic flavor. Both have a message both for those inside and outside the church, and each would make a fine film-sermon for Sunday evening or mid-week services. I recommend both for youth fellowship meetings as well. They hold the mirror up to our times in such a way that religious faith makes a lot of sense.

C.R.O.P.

Ambassadors To The Hungry is a 16mm B&W sound film documenting the origin and development of a unique American enterprise—CROP. These letters stand for the Christian Rural Overseas Program which seeks to relate our abundance to the stark need of the post-war world. This 26-minute film is available free, except for return postage, from CROP, 117 W. Lexington Ave., Elkhart, Indiana.

It gives us authentic scenes of the devastation caused by war, earthquake, flood and famine and beautiful scenes of America's bountiful harvests. It shows us the response which rural America has made to the needy of the world. Their hunger and general plight is realistically shown but not sensationalized. Food is seen as basic to world peace, human dignity and development, and to security for all mankind. And who can or will dispute this fact!

Here is a film for youth and adult groups in and out of church; in city, town, and country. It informs about CROP in particular, but it can motivate the support of all kinds of sharing programs. It is a document of hope. In the working out of His plan for the world, God has placed abundance in our hands. We will be measured and tested by what we do with it.

Over-View of Mid-East

Middle East Problems, a new release by Atlantis Productions, Inc. (7967 Sunset Blvd., Hollywood 46), in twenty some minutes gives us an overview of some of the basic problems of the Middle East countries: minority groups within political units; the general backwardness of agriculture; the slow but sure industrialization, and the widespread need for better health and educational standards.

The photography is good all the way, and the narration is informative—but not continuous, as in so many films. There are many "stretches" with background music only, and I liked them. It left some time for the mind to absorb and assimilate. Besides, the music is nicely keyed to the pictorial sequences.

This film is recommended for use with young people and adults to inform, to motivate further study; to orient them on some basic issues, and help them understand the essential nature of a key region of our contemporary world. As a background film on this year's ecumenical study theme, The Middle East, it should have wide and profitable use. Recommended.

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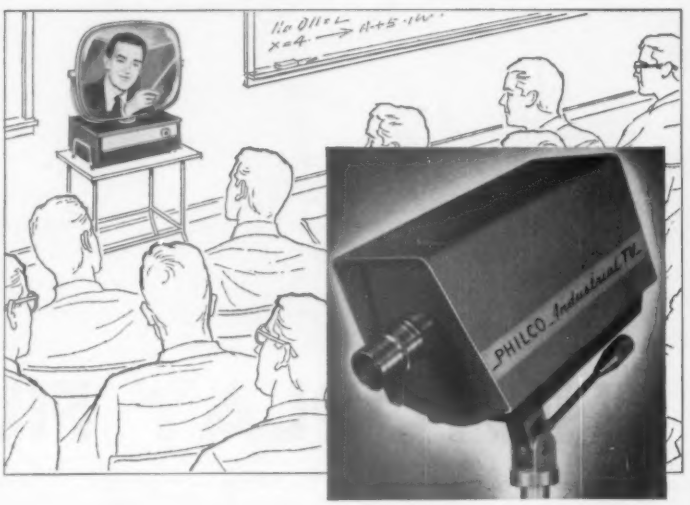

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Adventures of Robinson Crusoe — In full color, 50 frames, a clear pictorial guide to the Defoe classic, based on the United Artists screen version. **$7.50.** With guide, **$7.80.**

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Ulysses — In full color, 64 frames, a pictorial guide to the new Paramount screen version of Homer's Odyssey, produced in Italy. An invaluable aid to the study of the classic. **$7.50.** With guide, **$7.80.**

Prepared by William Lewin, Ph.D.

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Action Editor for 8mm motion picture film features 4x5" ground glass image, 110 watt lamp, fixed reel arms, stainless steel dry butt splicer, tapered all steel case. $39.95. PHOTO MATERIALS.
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Clip-on Exposure Meter, fits accessory shoe of many cameras, has dual low and high light-level scales reading directly in light values from 3 to 18, ASA scale 6 to 800; zero reset adjustment. $10.95 with case. KONICA.
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Versa Dolly—holds heavy tripods and cameras firmly clamped. One unit serves the purposes of a) baby tripod, b) tripod triangle, c) hi-hat; and d) dolly with clamps. $99.50. S.O.S.
For more information circle 105 on coupon

Vidicon Pan and Tilt Head accommodates also motion picture cameras. Counterbalanced for smooth pan and tilt; adjustable drag on pan and tilt; long rubber grip handle; 3/8" camera tie down screw; fits all professional tripods. $325. CEC.
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SOUND EQUIPMENT AND ACCESSORIES

Audiotape Splicer. Aluminum splicing block with built-in tape storage and cutting blade. $1.98. Color-coded Mylar splicing strips, three colors, 79 cents. EMDE.
For more information circle 107 on coupon

Convertible Language Center. Audio booths instantly convert to conventional classroom setting. **Audio Learner S-12** is a dual channel, two-speed recorder deck. Consultation service. ATC.
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"Cue Master" attachment for current model Califone record players provides immediate selection of any desired groove on any size record. An isolated music passage, the commentary on a single sound filmstrip frame, or any other selected sound component on a disc recording may be picked out and repeated as desired. The needle is lifted and lowered safely at the push of a button. CALIFONE.
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Full-track Recorder. Model 191 is like Model 90-C except for its full-track record/playback and erase heads. Hysteresis synch motor, VU meter. $325. Available also a 15 ips capstan pressure roller kit. ROBERTS.
For more information circle 110 on coupon

Plug-In Components are being offered to facilitate flexibility in fixed or portable language lab installations. These include single and dual-track recorders, master consoles, booth units, audio-active systems and accessories. CALIFONE.
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Califone Components

Pocket-size Wire Recorder with self-contained rechargeable silver cadmium battery, records up to 4 hours without reload (Model Minifon P-55 Model L), accessories include a wristwatch microphone, car battery connection. Also a new tape-cartridge model, wt. 6 lb., with all controls in microphone handle. GEISS.
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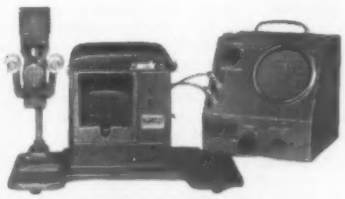

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60-watt Stereo Control Amplifier, each channel 30 watts of rated power, 60-watt peak power handling capacity in each channel. Stereo tone balance signal enables listener to introduce an audible signal into each channel to permit balance under operating environment. Separate bass, treble and volume controls. Mixed A & B "phantom output" provided for three channel stereo. STROMBERG-CARLSON.
For more information circle 114 on coupon

Stereo Broadcaster unit designed to adapt existing record player and radio receiver with minimum change or expense. A new stereo phono cartridge and the "Stereo Broadcaster" meets changeover situation in five different combinations of existing equipment. $24.95. MASCO.
For more information circle 115 on coupon

Tape Eraser. Complete erasure on any size reel or tape dimension, lowers noise level on unused tape, no rewinding, AC operated, safety push-button switch, wt. 2½ lb., 4" diam. 2" high. $18. ACA.
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Transmagnemite spring-motor driven, battery-operated, transistorized tape recorder. Six basic models in a price range from $370 to $505. Speeds 15/16 ips to 50 ips. Playing time up to 3 hours, winding interval up to 30 min, batteries 125 hour operation and rechargeable. Detailed specifications, apply. ACA.
For more information circle 117 on coupon

MISCELLANEOUS

Clear Groundglass Hand-Made Slides are now possible via a spray called by the KEYSTONE VIEW Co. "BrilliantVu." It clears away the grey background effect of etched glass to make the slide look as though it had been drawn on clear glass. This coating may be removed with Keystone Solvent so that the slide glass may be used repeatedly.
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Day-Glo Crayons, now available in eight fluorescent colors: Fire Orange, Signal Green, Neon Red, Saturn Yellow, Rocket Red, Arc Yellow, Aurora Pink, and Blaze Orange. Non-toxic. $1 per box of 12. AMCRAY.
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For more information circle 120 on coupon

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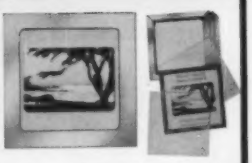

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Super-slide Hand Punch. Pliers-like cutter trims 127 or 120 film for slide mounting. $9.95. BURBR.
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NEW MATERIALS

KEY TO ABBREVIATIONS
mp—motion picture
fs—filmstrip
sl—slide
rec—recording
LP—33-1/3 r.p.m. microgroove record
min—minutes (running time)
fr—frames (filmstrip pictures)
si—silent
sd—sound
R—rent
b&w—black & white
col—color
Pri—Primary
Int—Intermediate
JH—Junior High
SH—Senior High
C—College
A—Adult

ARTS AND CRAFTS

Famous Art Masterpieces in Sculpture sl COLSLI col 38c-50c depending on quantity. Several hundred slides listed in free 16pp catalog. SH-C-A
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Fifty Years of Modern Art slides IVAC col set 227 slides $68.10 in cardboard mounts; $90.80 in aluminum. Partial sets also. Photographed at Brussels Fair 1958 and later modern art shows.
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Fifty Years of Modern Sculpture sl IVAC col set (71 slides) $21.30 cardboard, $28.40 aluminum. Photographed at the Brussels Worlds Fair 1958 and other European exhibitions.
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GUIDANCE: Personal

Beginning Responsibility: Books and Their Care mp CORONET 11min sd col $110 b&w $60. Sue learns from brother Tommy some of the important steps in care of books, as something to appreciate and enjoy. P.
For more information circle 128 on coupon

Facing Reality mp MH 12min sd b&w $75. Defense and escape mechanisms used to avoid realities of life. Boy shaken out of negative attitude. HS C
For more information circle 129 on coupon

Growing Up Day by Day mp EBF 10 min. sd col $120 b&w $60. A birthday party for third-graders points up the importance of learning to "act your age." Food, exercise, rest, behavior. Pri. Int.
For more information circle 130 on coupon

Habit Patterns mp MH 15min sd b&w $85. Two girls contrasted, one sloppy, tardy, unmannerly, the other the reverse. SH-C
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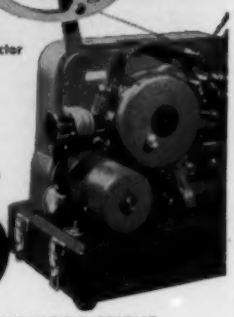

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Successful Scholarship mp MH 11min sd b&w $60. Average student achieves goal in nursing career by rigorous self-discipline. SH - C
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RELIGION AND ETHICS

Buried Treasures in Bible Lands 2sfs FAMILY sd col Set (2fs and 12" LP) $16.50; indiv fs ea $6.50; rec $3.50. Titles: **Bible Scrolls; Bible Cities.** Jun - A
For more information circle 133 on coupon

Daily Life in the Bible Lands 2sfs FAMILY sd col Set (2fs and 7" LP) $11; indiv fs ea $5.25; rec ea $2. **Titles: At Home and at Work in Bible Lands** (30fr); **Shepherds in the Bible Lands** (30fr). Pri.
For more information circle 134 on coupon

Donny Grows Up 4sfs FAMILY 20-25fr two 7" LP records and leader's guide. Set (4 with 2 records) $19.50; indiv. fs ea $5.25; rec @ $2. Titles: **Surprise** (a sunflower seed shows God's miracle of growth); **Something New** (baby sister); **The Jolly-Bus** (God's Order); **The Star** (Donny wishes for a star and learns the eternal lesson of "mine—God's"). Pri.
For more information circle 135 on coupon

The Harvest mp BFC 30 min sd b&w r $6. A young farm boy is helped to a decision between working the family acres or going to the city. Rural minister shows his choice is similar, and both find their answer in the stewardship to which they have been entrusted. National Film Board of Canada production. SH - A
For more information circle 136 on coupon

Lourdes mp CFD 40min sd col lease (5 years) $325. The town, shrines and ceremonies; the sick at the Grotto; new underground Basilica and Easter High Mass; pilgrims following the Way of the Cross; torchlight procession; communion of the sick at Bernadette's altar.
For more information circle 137 on coupon

New Faces of Africa mp BFC 28½min sd col r$12 b&w r$8. This 1959-1960 foreign mission study theme film emphasizes today's tempo of change and unrest. Included are film interviews with new leaders such as Tom M'boya and Dr. Julius Kiano. SH - A (See cover)
For more information circle 138 on coupon

SCIENCE: Biology

A Badger's Bad Day mp GJP 11½min sd col $115 (including color filmstrip and 10 b&w 8x10" study prints. A badger encounters a skunk family—and learns the importance of the sense of smell. Other forest animals are encountered, also. Pri.
For more information circle 139 on coupon

Growth of Flowers mp CORONET 11min sd col $110 b&w $60. Time lapse shows accelerated growth of jonquil, jack-in-the-pulpit, phlox, lily, rose, zinnia, gladiola and water lily—sprouting, struggle for sunlight and air, and finally bursting into bloom. Pri Int JH SH
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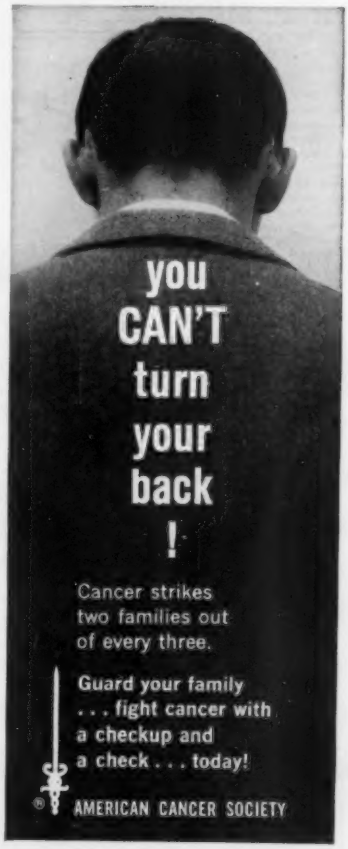
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The Human Body: Reproductive System mp CORONET 13½min sd col $137.50 b&w $75. Part of series for teaching physiology, this film describes male and female organs and functions. Live action photography of sperm and egg cells uniting. Ovum, uterus, zygote. SH C
For more information circle 141 on coupon

Mother Deer and Her Twins mp EBF 11 min sd col $120 b&w $60. Twin fawns, Fleet and Shy, from the age of two days to nearly a year. Pri Int
For more information circle 142 on coupon

Orders of Insects mp THORNE 30min sd col $275 r $7.50. General characteristics, then specific characteristics of each of the nine most common orders in live photography in natural habitat, color, closeup detail. SH C A
For more information circle 143 on coupon

Reptiles and Their Characteristics mp CORONET 11min sd col $110, b&w $60. The five orders that make up the reptile group, their common characteristics and some of their differences. Snakes, lizards, turtles, crocodilians and the rare tuatara in natural habitat and some of the ways in which they benefit mankind. Int JH SH.
For more information circle 144 on coupon

SCIENCE: General

Atomic Energy as a Force for Good mp CHRISTOPHERS 30min sd b&w $30. Texas rancher becomes convinced the atom can be made a power for peace and gives up his opposition to location of an atomic plant in his area. (Paul Kelly) JH-A
For more information circle 145 on coupon

Beyond Our Solar System mp CORONET 11min sd b&w $60. Telescopic photography and artwork explain basic concepts about stars, nebulas, major constellations, and galaxies beyond our Milky Way. Physical characteristics of these bodies; their great distances from earth and from each other. Int. JH
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Boats: Buoyancy, Stability, Propulsion mp CORONET 13½min sd col $137.50 b&w $75. Archimedean principle explained; factors in design that make for stability; various propulsion methods; how a submarine submerges and rises. Int JH
For more information circle 147 on coupon

Rocks for Beginners mp J-H 16min sd col $165. Fundamentals of rock classification; origin, characteristics. Meaningful identification of sample with formation. Elem.
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The Calendar: Story of its Development mp CORONET 11min sd col $110, b&w $60. Primitive concepts of time based on earth's relationship to heavenly bodies. Egyptian, Babylonian and Roman culture. Some consideration of the Mayan calendar. Int SH
For more information circle 149 on coupon

The World of Molecules mp C-W 11min sd col $100 b&w $50. Animation helps to visualize the size and behavior of molecules in a solid, a liquid and a gas. Two children enliven the presentation by their experiments. Correlated with Heath Elementary Science Texts. Int. JH.
For more information circle 150 on coupon

SOCIAL STUDIES: Geography

Around Manhattan in 40 Slides sl WALTSTERL col set $12.75. New York's Manhattan photographed from boat circling the island. Includes a color map. JH-A
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Geographical Diamaps sl IVAC 2x2 in color, aluminum mounts @ 50c, cardboard slightly less. Sets of maps in color; **Europe** (26), **North America** (24), **The World — Economic** (30) etc. 12 sets all told, lettering English language.
For more information circle 152 on coupon

Geography of the Holy Land sfs FAMILY sd col 40fr and 12" LP $9; fs only $6.50; rec $3.50. Photographed by Rev. Donald Lantz, 1958. Int - A
For more information circle 153 on coupon

Greece: The Land and the People mp CORONET 11 min sd col $110 b&w $60. Photographed in Greece. Geographical features related to social and economic development. Historic problems resulting from poor land. Conservation, agriculture, transportation, industry. Int. JH.
For more information circle 154 on coupon

One Road mp FORD 25min sd col loan. Two test drivers take an automobile around the world, including seldom traveled routes in Turkey, Iran and Afghanistan. El-A
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THE AUDIO-VISUAL EQUIPMENT MANUAL. By James D. Finn. Published under the general editorship of Edgar Dale. 384 pp. 1400 illustrations. Henry Holt and Co., 383 Madison Ave., New York 17, N. Y. $15.00.

AUDIO-VISUAL MATERIALS: THEIR NATURE AND USE. Revised Edition. By Walter Arno Wittich and Charles F. Schuller. 570 pp. 249 Illustrations, 14 Color Plates. Harper & Brothers, 49 E. 33rd St., New York 16, N.Y. 1957. $6.50.

AUDIO-VISUAL METHODS IN TEACHING: REVISED AND ENLARGED. By Edgar Dale. 544 pp. Illustrated; and with 49 full-color plates. Henry Holt and Co., 383 Madison Ave., New York 17, N. Y. $7.75.

EDUCATORS GUIDE TO FREE SLIDEFILMS. Compiled and Edited by Mary Foley Horkheimer and John W. Diffor. Eleventh Annual Edition, 1959. Educators Progress Service, Dept. AVG, Randolph, Wis. $6.00.

EDUCATORS GUIDE TO FREE TAPES, SCRIPTS, AND TRANSCRIPTIONS. Compiled and Edited by Walter A. Wittich, Ph.D., and Gertie Hanson Halsted, M. A. Fifth Annual Edition, 1959. Educators Progress Service, Dept. AVG, Randolph, Wis. $5.75.

EDUCATORS GUIDE TO FREE FILMS. Compiled and Edited by Mary Foley Horkheimer and John W. Diffor. Educational Consultant, John Guy Fowlkes. 19th Annual Edition, 1959. Educators Progress Service, Dept. AVG, Randolph, Wis. $7.00.

MITCHELL'S MANUAL OF PRACTICAL PROJECTION. 450 pp. Illustrated and cross-indexed. Covers every aspect of motion picture projection. Material presented in easily understood language — not too technical, yet technically accurate. Most complete and practical handbook for projectionists ever published. International Projectionist Pub. Co., 19 West 44 Street, New York 36, N. Y. $6.00.

STANDARDS OF PHOTOPLAY APPRECIATION. A Course of Study in Photoplay Appreciation, Including a Photoplay Approach to Shakespeare. By William Lewin and Alexander Frazier. Illustrated. Educational & Recreational Guides, Inc., 10 Brainerd Road, Summit, New Jersey. $4.75.

A WINDOW TO THE CHILD'S MIND — Alpark's New Educational Handbook by Dorothy R. Luke, 268 pp. The first authentic analysis of Helen Parkhurst's recorded interviews with children. An indispensable guide for teachers. 1955 Alpark Educational Records, Inc., 40 East 88th Street, New York 28, N. Y.

SOCIAL STUDIES: History and Anthropology

The American Jew: A Tribute to Freedom mp ADL 45min sd bGw Service Charge. People of Jewish origin in many walks of life—farmer, fireman, rabbi, airline hostess, violinist, writer, actress, statesman, cartoonist, and many more. Immigration and pluralistic culture. Guide. SH A
For more information circle 156 on coupon

Colonial Plantation Living With George Washington prints AVE col set (10) $15. Silk screen reproduction in color of ten scenes of colonial life at Mount Vernon. Reverse side carries 10 additional pictures in monochrome. Included also are 10 text plates giving additional information. El - HS
For more information circle 157 on coupon

Colonial Shipping and Sea Trade mp CORONET 11min sd col $110 bGw $60. How Colonial trade routes were established and the effect of Britain's restrictive legislation. Int JH
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The Labor Movement: Beginnings and Growth in America mp CORONET 13½ min sd col $137.50 bGw $75. Development traced from post Civil War period to World War I. How the working man sought to achieve his goals within the changing relations of capital, labor and government. JH SH C
For more information circle 159 on coupon

Life in Ancient Greece—Home and Education mp CORONET 13½min sd col $137.50 bGw $75. Typical Athenian family of potters reveal mode of life in 440 B.C. Education of the boy—and, in the household, the girl. Int JH
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Life in Ancient Greece—Role of the Citizen mp CORONET 11min sd col $110 bGw $60. Political and economic life in a city-state 440 B.C. Privileges and responsibilities of citizenship in this early democracy. We watch boys take the momentous Ephebic Oath, prerequisite to full citizenship. Int JH
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Spanish Colonial Family of the Southwest mp CORONET 13½min sd col $137.50 bGw $75. A self-sufficient hacienda in the early 19th century. Role of the Indians and of the Catholic mission. Int. JH.
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Turmoil in the Arab World fs NYTIMES 57fr si bGw $2.50. Eighth in the annual series ($15). Manual supplies supplementary information for each frame. SH
For more information circle 163 on coupon

NEW PUBLICATIONS

Amateur Filmstrip Production. Manual based on campus production experience in turning out filmstrips of professional quality. $1. OSU.
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Cinema Laboratories 1959. A worldwide directory of motion picture laboratories, 134 in the United States, 114 in 34 other countries. In each case the kinds of work the laboratory is equipped to do is indicated. Single copies $1. Association of Cinema Laboratories, Inc., 1226 Wisconsin Ave., NW, Washington 7, D.C.

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115	116	117	118	119	120	121	122	123	124	125	126	127	128
129	130	131	132	133	134	135	136	137	138	139	140	141	142
143	144	145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180	181	182	183	184
185	186	187	188	189	190	191	192	193	194	195	196	197	198
199	200	201	202	203	204	205	206	207	208	209	210	211	212
213	214	215	216	217	218	219	220	221	222	223	224	225	226
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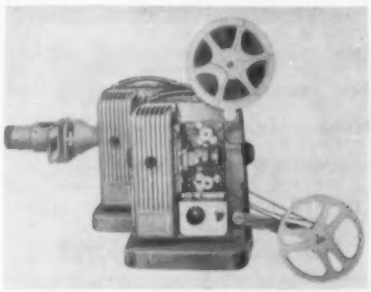

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Advertisement

HELPFUL BOOKS

THE AUDIO-VISUAL EQUIPMENT MANUAL. By James D. Finn. Published under the general editorship of Edgar Dale. 384 pp. 1400 illustrations. Henry Holt and Co., 383 Madison Ave., New York 17, N. Y. $15.00.

AUDIO-VISUAL MATERIALS: THEIR NATURE AND USE. Revised Edition. By Walter Arno Wittich and Charles F. Schuller. 570 pp. 249 Illustrations, 14 Color Plates. Harper & Brothers, 49 E. 33rd St., New York 16, N.Y. 1957. $6.50.

AUDIO-VISUAL METHODS IN TEACHING: REVISED AND ENLARGED. By Edgar Dale. 544 pp. Illustrated; and with 49 full-color plates. Henry Holt and Co., 383 Madison Ave., New York 17, N. Y. $7.75.

EDUCATORS GUIDE TO FREE SLIDEFILMS. Compiled and Edited by Mary Foley Horkheimer and John W. Diffor. Eleventh Annual Edition, 1959. Educators Progress Service, Dept. AVG, Randolph, Wis. $6.00.

EDUCATORS GUIDE TO FREE TAPES SCRIPTS, AND TRANSCRIPTIONS. Compiled and Edited by Walter A. Wittich, Ph.D., and Gertie Hanson Halsted, M. A. Fifth Annual Edition, 1959. Educators Progress Service, Dept. AVG, Randolph, Wis. $5.75.

EDUCATORS GUIDE TO FREE FILMS. Compiled and Edited by Mary Foley Horkheimer and John W. Diffor. Educational Consultant, John Guy Fowlkes 19th Annual Edition, 1959. Educators Progress Service, Dept. AVG. Randolph, Wis. $7.00.

MITCHELL'S MANUAL OF PRACTICAL PROJECTION. 450 pp. Illustrated and cross-indexed. Covers every aspect of motion picture projection. Material presented in easily understood language — not too technical, yet technically accurate. Most complete and practical handbook for projectionists ever published. International Projectionist Pub. Co., 19 West 44 Street, New York 36, N. Y. $6.00.

STANDARDS OF PHOTOPLAY APPRECIATION. A Course of Study in Photoplay Appreciation, Including a Photoplay Approach to Shakespeare. By William Lewin and Alexander Frazier. Illustrated. Educational & Recreational Guides, Inc., 10 Brainerd Road, Summit, New Jersey. $4.75.

A WINDOW TO THE CHILD'S MIND — Alpark's New Educational Handbook by Dorothy R. Luke, 268 pp. The first authentic analysis of Helen Parkhurst's recorded interviews with children. An indispensable guide for teachers. 1955 Alpark Educational Records, Inc., 40 East 88th Street, New York 28, N. Y.

SOCIAL STUDIES: History and Anthropology

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Cinema Laboratories 1959. A worldwide directory of motion picture laboratories, 134 in the United States, 114 in 34 other countries. In each case the kinds of work the laboratory is equipped to do is indicated. Single copies $1. Association of Cinema Laboratories, Inc., 1226 Wisconsin Ave., NW, Washington 7, D.C.

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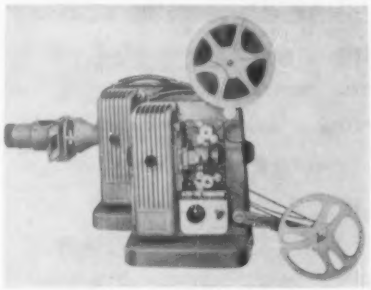

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Directory of Sources

ACA: Amplifier Corp. of America, 398 Broadway, New York 13.

ADL Anti-Defamation League of B'nai B'rith 515 Madison Ave., N.Y. 22

AMCRAY—American Crayon Co., 1706 Hayes Ave., Sandusky, Ohio.

ATC — Audio Teaching Center, Inc. Audio Lane, New Haven, Conn.

AVE: Audio-Visual Enterprises, Box 8686, Los Angeles 8.

BFC: Broadcasting and Film Commission, National Council of the Churches of Christ in the U.S.A., 220 Fifth Avenue, New York 1.

BURBR—Burleigh Brooks, Inc., 10 W. 46th St., New York 36, N.Y.

CALIFONE Corp., 1041 N. Sycamore Ave., Hollywood 38.

CEC—Camera Equipment Co. Inc., 315 W. 43 St., New York 36.

CFD—Classroom Film Distributors, Inc, 201 N. Occidental, Los Angeles 26, Calif.

The CHRISTOPHERS, 18 E. 48th St., New York 17, N.Y.

CMUS—Children's Music Center, 2858 W. Pico Blvd., Los Angeles 6, Calif.

COLSLI—Color Slide Encyclopedia, P.O.B. 123, Cincinnati 31, Ohio.

CORONET Films, 65 E. South Water St., Chicago 1.

C-W Churchill-Wexler Film Productions, 801 North Seward St., Los Angeles 38, Calif.

EBF: Encyclopaedia Britannica Films Inc., 1150 Wilmette Ave., Wilmette, Ill.

EMDE Products, 2040 Stoner Ave., Los Angeles 25, Calif.

FAIRCHILD Camera and Instrument Corp., Robbins Lane, Syosset, L.I., N.Y.

FAMILY Films Inc., 5823 Santa Monica Blvd., Hollywood 38.

FOLKWAYS Records and Service Corp., 117 W. 46 St., New York 36.

GEISS—Geiss-America, Chicago 45, Ill.

GJP—Grover-Jennings Productions, 2765 Forest Glen Trail, Deerfield, Ill.

GRAFLEX Inc., 154 Clarissa St., Rochester, N.Y.

IVAC—International Visual Aids Center, 37 rue de Linthout, Brussels 4, Belgium.

J-H—Johnson Hunt Productions, Film Center, La Canada, Calif.

KEYSTONE VIEW Company, Meadville, Pa.

KODAK—Eastman Kodak Co., Nontheatrical Motion Picture Div., Rochester, N.Y.

KONICA Camera Co., 76 W. Chelton Ave., Philadelphia 44, Pa.

LUDWIG—F. G. Ludwig, Inc., 151 Coulter Place, Old Saybrook, Conn.

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MIRATEL, Inc., 1080 Dionne St., St. Paul 13, Minn.

NYTIMES, Office of Educational Activities, 229 W. 43rd St., New York 36.

OSU—Ohio State University, Department of Photography, Columbus 10.

PHOTO MATERIALS Co., 2100 W. Fulton St., Chicago 12.

RICHARD Mfg. Co., 5914 Noble Ave., Van Nuys, Calif.

ROBERTS Electronics Inc., 1028 N. LaBrea Ave., Los Angeles 38.

SMC—Science Materials Center, 59 Fourth Ave., New York 3, N.Y.

S.O.S.—Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.

STROMBERG-CARLSON, Rochester 3, New York.

TECHNIFAX Corporation, 195 Appleton St., Holyoke, Mass.

THORNE Films, Inc., 1707 Hillside Road, Boulder, Colo.

VOSS Photo Corporation, 601 W. 156th St., New York 32, N.Y.

WALTSTERL — Walt Sterling, 224 Haddon Road, Woodmere, L.I., N.Y.

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(5) **Audio-Master Corp.—record and transcription players, page 311**

(6) **Bailey Films, Inc.—"Flannel Boards and How to Use Them," "Bulletin Boards—an Effective Teaching Device," films, page 298**

(7) **Camera Equipment Co., Inc.—Weinberg Watson projector, page 301**

(8) **Camera Mart, The, Inc. — Camart Dual Sound Reader with B&H viewer, page 307**

(9) **C.O.C. Industrial — C.O.C. Examiner portable filmstrip projector, page 300**

(10) **Contemporary Films, Inc.—"The Hunters," "The Lady from Philadelphia," films, page 309**

(11) **Coronet Films—"The Human Body: Reproductive System," film, page 299**

(12) **Dage Television—Educational TV system, page 277**

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(15) **Dowling, Pat, Pictures — "Our Natural Resources," film, page 308**

(16) **Eastman Kodak Co.—Pageant projectors, page 281**

(17) **Educational & Recreational Guides, Inc. —photoplay filmstrips and study guides, page 306**

(18) **Emde Products—slide mounts, page 308**

(19) **Fiberbilt Case Co.—film shipping cases, page 308**

(20) **Harwald Co., The—Movie Mite 16mm sound projector, page 310**

(21) **Indiana University — Combination for Communication — films and manual, page 308**

(22) **Keystone View Co.—Keystone Standard overhead projector, page 282**

(23) **Levolor Lorentzen—AV venetian blinds, page 275**

(24) **Ozalid Division (General Aniline & Film Corp.) — Projecto-Printer 30 transparency unit, page 279**

(25) **Peerless Film Processing Co.—film reconditioning, page 309**

(26) **Philco Corp.—all-transistor TV camera, page 305**

(27) **Porter Sargent Publications—"Handbook of Private Schools," "Guide to Junior Colleges and Specialized Schools and Colleges," books, page 310**

(28) **Radio-Mat Slide Co.—slide mats, page 308**

(29) **Rapid Film Technique—film rejuvenation, page 308**

(30) **Rembrandt Film Library—"A Dancer's World," "The Golden Age of Flemish Painting," films, page 311**

(31) **Smith System Mfg. Co.—projector cabinets and stands, tape and film cabinets, page 278.**

(32) **Stik-a-letter Co.—visual letters, page 300**

(33) **Strong Electric Corp., The—Universal arc slide projector, page 311**

(34) **Technifax Corp.—Technifax Slidemaster system, inside front cover**

(35) **Vacuumate Corp.—film protective process, page 308**

(36) **Victor Animatograph Corp. — Victor Soundview slidefilm equipment, back cover**

(37) **Visual Sciences—science filmstrips, page 300**

TRADE DIRECTORY FOR THE AUDIO-VISUAL FIELD

KEY: (P)—producers, importers. (M)—manufacturers. (D)—dealers, distributors, film rental libraries, projection services. Where a primary source also offers direct rental services, the double symbol (PD) appears.

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Broad at Elm, Ridgefield, N. J.
561 Hillgrove Ave., La Grange, Ill.
799 Stevenson St., San Francisco, Cal.
1108 Jackson St., Dallas 2, Tex.

Australian News and Information Bureau (PD)
636 Fifth Ave., New York 20, N. Y.

Bailey Films, Inc. (PD)
6509 De Longpre Ave., Hollywood 28, Cal.

Bray Studios, Inc. (PD)
729 Seventh Ave., New York 19, N. Y.

Broadman Films (PD)
127 Ninth Ave., North, Nashville 3, Tenn.

Coronet Instructional Films (P)
Coronet Bldg., Chicago 1, Ill.

Dowling—Pat Dowling Pictures (PD)
1056 S. Robertson Blvd., Los Angeles 35, Cal.

Family Films, Inc. (PD)
5823 Santa Monica Blvd., Hollywood 38, Calif.

Hollywood Film Enterprises Inc.
6060 Sunset Blvd., Hollywood 28, Calif.

Ideal Pictures, Inc. (D)
Home Office:
58 E. South Water St., Chicago 1, Ill.
Branch Exchanges:
1840 Alcatraz Ave., Berkeley 3, Cal.
2408 W. Seventh St., Los Angeles 57, Cal.
714 - 18th Street, Denver 2, Colo.
1331 N. Miami, Miami 32, Fla.
52 Auburn Ave., N.E., Atlanta 3, Ga.
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2204 Ingersoll, Des Moines 12, Ia.
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102 W. 25th St., Baltimore 18, Md.
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West Penn Bldg., Suite No. 204, 14 Wood St., Pittsburgh 22, Pa.
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18 So. Third St., Memphis 3, Tenn.
1205 Commerce St., Dallas, Tex.
54 Orpheum Ave., Salt Lake City, Utah
219 E. Main St., Richmond 19, Va.
1370 S. Beretania St., Honolulu, T.H.

International Film Bureau (PD)
57 E. Jackson Blvd, Chicago 4, Ill.

Knowledge Builders (Classroom Films) (PD)
Visual Education Center Bldg.,
Floral Park, N. Y.

United World Films, Inc. (PD)
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542 S. Dearborn St., Chicago 5, Ill.
6610 Melrose Ave., Los Angeles 38, Cal.
287 Techwood Dr., NW, Atlanta, Ga.
2227 Bryan St., Dallas, Tex.
5023 N. E. Sandy Blvd., Portland 13, Ore.
1311 N. E. Bayshore Dr., Miami, Fla.

For information about Trade Directory advertising rates, write EDUCATIONAL SCREEN & AUDIO-VISUAL GUIDE, 2000 Lincoln Park West Bldg., Chicago 14, Ill.

FILMSTRIPS

Broadman Filmstrips (PD)
127 Ninth Ave., North, Nashville 3, Tenn.

Children's Reading Service
1078 St. John's Place, Brooklyn 13, N. Y.

Curriculum Materials Corporation (PD)
Headquarters Office
119 S. Roach St., Jackson, Miss.
Regional Offices
1319 Vine St., Philadelphia, Pa.
10031 Commerce Ave., Tujunga, Calif.
14-20 Glenwood Ave., Raleigh, N. C.

Family Filmstrips, Inc. (PD)
5823 Santa Monica Blvd., Hollywood 38, Calif.

Enrichment Materials Inc. (PD)
246 Fifth Ave., New York 1, N. Y.

Society for Visual Education (PD
1345 Diversey Parkway, Chicago 14

Teaching Aids Service, Inc. (PD)
Lowell Ave. & Cherry Lane, Floral Park, N.Y.
31 Union Square West, New York 3

Visual Education Consultants, Inc. (PD)
VEC Weekly News Filmstrips,
2066 Helena St., Madison, Wis.

FILMSTRIP, SLIDE & OPAQUE PROJECTORS

Broadman Films (PD)
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DuKane Corporation (M)
St. Charles, Illinois

Graflex, Inc. (M)
(SVE Equipment)
Rochester 3, New York

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S.O.S. Cinema Supply Corp. (MD)
602 W 52nd St., New York 19, N. Y.
6331 Hollywood Blvd., Hollywood 28, Cal.

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Enrichment Materials Inc. (PD)
246 Fifth Ave., New York 1, N. Y

Folkways Records & Service Corp.
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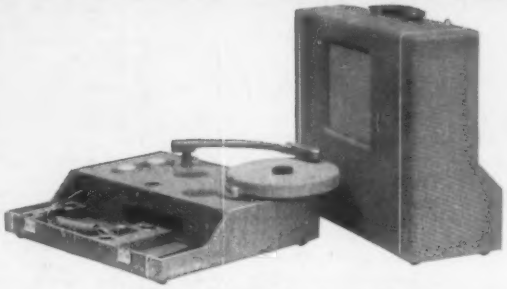

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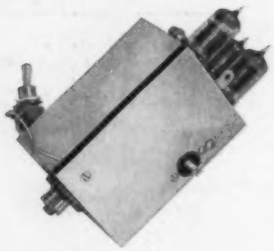

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